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ABSTRACT

A project was conducted in South Carolina (1) to develop a method by which the pupil cost of providing instruction in vocational education can be determined; and (2) to determine the per pupil cost of vocational instruction in the state. An examiniation was made of the methodology previously used by the South Carolina Department of Education to determine the per pupil costs for educating students in the state. The method and cost factors were then modified as necessary and a survey was conducted of local vocational administrators to determine actual expenditures by occupational program area for fiscal year 1981. The following conclusions were reached: (1) costs for providing vocational training to secondary students in the state differ substantially from school to school and from program to program; (2) the median per pupil cost per vocational program as reported here represents the most current, accurate cost that can be obtained from information submitted by local educators; (3) comparisons cannot be made between high school and vocational center cost data because of the difference in the responses of usable data between the two types of schools; and (4) even though high school costs cannot be generalized statewide, vocational center costs appear to be higher in most programs. Recommendations were made to create a cost management handbook for local administrators; to identify means of economizing; to divide programs into components for determining costs at lowest possible level; and to find the costs for programs for which data were not obtained. (KC)

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The South Carolina Vocational Education Cost Study

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TABLE OF CONTENTS

LIST OF TABLES i

ACKNOWLEDGEMENTS ii

PREFACE. iii

SECTION I - NATURE OF THE STUDY. 1

Introduction. 1

Background. 1

Purpose of the Study. 3

Delimitations of the Study. 3

Definition of Terms 4

SECTION II - RESEARCH METHODS AND PROCEDURES 7

SECTION III - FINDINGS 15

Summary of Findings 17

A Representative Example of the Per Pupil Cost Distribution in a Particular Program Area 17

SECTION IV - CONCLUSIONS AND RECOMMENDATIONS 21

Conclusions 21

Recommendations 21

BIBLIOGRAPHY 23

APPENDIX A

Vocational Education Cost Survey. A-1

Advance Notice Letter A-7

Transmittal Letter. A-9

Reminder Postcard A-11

APPENDIX B

Figure 1. Statewide Per Pupil Median Costs by Program and Type of Institution B-1

Medians For Each Cost Category by Program:

Figure 2. Agriculture B-7

Figure 3. Business and Office Education B-8

Figure 4. Health. B-9

Figure 5. Home Economics. B-10

Figure 6. Marketing and Distributive Education. B-11

Figure 7. Prevocational Education B-12

Figure 8. Air Conditioning and Refrigeration. B-13

Figure 9. Appliance Repair. B-14

Figure 10. Auto Body Repair. B-15

Figure 11. Auto Mechanics. B-16

Figure 12. Building Construction B-17

Figure 13. Cabinet Making. B-18

Figure 14. Commercial Art. B-19

Figure 15. Cosmetology B-20

Figure 16. Drafting. B-21

Figure 17. Electricity B-22

Figure 18. Electronics B-23

Figure 19. Graphic Communications. B-24

Figure 20. Industrial Sewing B-25

Figure 21. Machine Shop. B-26

Figure 22. Masonry B-27

Figure 23. Plumbing and Pipefitting. B-28

Figure 24. Radio and Television Repair B-29

Figure 25. Small Engine Repair B-30
Figure 26. Tailoring B-31
Figure 27. Textiles. B-32
Figure 28. Welding B-33

LIST OF TABLES

Table Number		Page Number
1.	Useable Return Response Rates by Program and Type of Institution	13
2.	Summary of Statewide Per Pupil Median Costs by Program and Type of Institution.	19

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PREFACE

This study has been prepared to identify, for the first time in South Carolina, statewide per pupil costs for each of the vocational programs offered through the secondary vocational education system in the state.

This report consists of four major sections. Section I, the Nature of the Study, provides background information, a statement of the problem, the need, the purpose, objectives of the study, delimitations of the study, and definition of terms. Section II is entitled Research Methods and Procedures, and describes the manner in which the study was designed and conducted. The Findings of the study presented in Section III, describes information and data collected by the survey and explains the outcomes. Section IV contains the Conclusions and Recommendations, followed by the Appendix.

SECTION I

NATURE OF THE STUDY

Introduction

Educators in South Carolina, like those in other sectors of the country, are becoming more and more cost conscious. While the governance of fiscal resources to operate educational institutions is becoming more restrictive and the availability of funds is limited, the demand for more and better programs of study is increasing. In addition, rising costs for construction and services, along with those for teacher salaries and teacher supplies and materials, are increasing the fiscal management burden for school administrators. Federal, state, and local education leaders are constantly searching for ways to maintain essential services and even to increase services that are becoming increasingly important to relevant educational opportunities for students.

In South Carolina educators have chosen to reassess the educational costs for various instructional programs. The Office of Vocational Education took its initial step in the reassessment of vocational costs with a study to determine the cost per student in each program offered through the vocational system. This report explains the procedures and the findings of the study.

Background

Measuring the effectiveness and relevancy of vocational programs, services and activities is an important concern of the South Carolina

Office of Vocational Education. An extensive amount of time and effort has been expended to develop an evaluation system and set of vocational program standards to ensure that South Carolina has an effective delivery system. For several reasons one factor, cost, has not yet become a part of the evaluation standards. Cost factors used by various agencies are considered to be insufficient because they represent only a part of the total funds used to support vocational education. Furthermore, the costs are not subdivided by type of educational institution (high school and vocational center) or by type of program (agriculture, cosmetology, etc.). Thus, the following problems are evident:

1. No average vocational cost per student has been determined based on total fiscal resources.
2. No cost comparisons can be made among the vocational program areas.
3. No vocational cost comparisons can be made by type of institution - high school and vocational center.
4. There are insufficient data to determine the appropriateness of the level of funding in comparison to actual expenditures.

Clearly, each of these problems is related to the need for an acceptable cost base.

Recognizing this need the Office of Vocational Education established a research objective for FY 1982 to develop a method by which the per pupil cost of providing instruction in vocational education could be determined. The objective was later modified to develop a method and

to conduct a study to determine the vocational per pupil cost by program area.

Purpose of the Study

In response to the need for accurate cost data, the Office of Vocational Education Research Staff designed a study which should:

1. Establish a per pupil cost for each vocational program to illustrate the differences in the costs among vocational programs.
2. Establish a per pupil cost that would enable vocational administrators to determine the difference between actual and appropriate costs for each program.

The objective of the study was to determine the statewide per pupil cost for educating a vocational student in a particular program of study in South Carolina. The per pupil costs would be determined by program for secondary high school vocational students and vocational center students.

Delimitations of the Study

Limitations of the data used in this study include:

1. The cost data collected for the study are applicable only to school year 1980-81.
2. The costs submitted by respondents only represent expenditures for maintaining vocational programs and not for implementing new programs.

Definition of Terms

Several terms will be used throughout this paper to explain the findings of the study. The meaning of many of the terms may not be clear without some explanation; thus, those terms most critical for accurate interpretation of the data have been defined as follows.

1. Supporting Services Costs. Costs that are not considered to be directly related to classroom instruction expenses. These costs include the general administration of an educational institution (salaries, supplies, etc., for administrative staff), finance and operations (fiscal services, operation and maintenance of plant, and internal services), and pupil services (guidance, health, placement and psychological).

2. Instruction Costs. These costs are directly related to classroom instruction and include instruction personnel salaries and employee benefits, purchased services, supplies and materials, and equipment. An "other" category was also included to provide related miscellaneous costs.

3. Salaries (Instruction). This category reflects the total amount paid in wages to all teachers and their assistants (if applicable) for a particular institution in a specific program area. The expenditures reported by respondents may on one survey form represent the salary for one teacher while on another form include the salary for one full-time teacher, one part-time teacher, and a teacher's aide. Cost data in this category represent the total salary cost incurred by an institution for a designated program.

4. Employee Benefits. Benefit payments to school employees including items such as health and life insurance, retirement, social

security, unemployment compensation tax, and workman's compensation tax. This cost is usually equal to 13.95 percent of the employees' wages.

5. Purchased Services. Services provided by personnel who are not on the school or district payroll. These services may include but are not limited to: curriculum consultants, contracts for upkeep of grounds and buildings, travel expenses for teachers, and telephone cost.

6. Supplies and Materials. This cost category includes items such as: expendable supplies, postage, textbooks, library books, periodicals, and other instructional materials (curriculum guides, etc). For this study, classroom project supplies such as food stuffs for home economics and wood for building construction were included.

7. Equipment. Expenditures for additional and replacement equipment for instruction and vehicles.

8. Other Instruction Costs. This category included any instruction costs not covered in the preceding items along with instruction equipment maintenance costs (e.g., a service contract to repair a malfunctioning table saw).

9. Total Expenditures. The entire actual amount of money spent on services, supplies, materials or equipment plus the monetary value of donated items for use in a program of instruction. These expenditures place no restriction on the source of funds used.

10. Median. A measure of central tendency; that point in a distribution of measures (costs) above and below which fifty percent of the cases (costs) lie. This measure is also the best indicator of typical cost when there are extreme values in a distribution.

11. Range. The distance between the highest and lowest costs in

a distribution of costs and is found by subtracting the smallest value from the largest.

12. Distribution. The sequential listing of all costs in a set. Typically the values are arranged from highest to lowest.

13. Precision. The degree of accuracy (confidence) attainable in determining vocational costs for all factors, programs, or institutions.

SECTION II

RESEARCH METHODS AND PROCEDURES

This section presents the steps that were taken to determine the statewide per pupil cost for educating a vocational student in a particular program of study.

Following an extensive review of the South Carolina Educational Finance Act and of the various approaches in conducting cost studies, the South Carolina Office of Vocational Education organized an advisory committee composed of district superintendents, vocational directors, personnel from the Office of Finance, and the Office of Vocational Education. The purpose of the committee was to provide direction to the research staff regarding the manner in which the study should be conducted. The committee members were expected to critically review alternative approaches to the study, identify potential problems, and suggest ways to overcome problems encountered. Because of the commitment and cooperation of the advisory committee, many valuable contributions were made to the study plan and to the composition of the survey instrument. A significant task was that of selecting the essential cost factors for which data were to be collected and used to determine the per pupil costs. The final study plan involved sending a Vocational Education Cost Survey instrument (see Appendix A, pages A-1 to A-5) to all South Carolina high school principals and vocational center directors with information copies to the local superintendents and district or county vocational

directors to ensure that a representative return would be realized for each program area.

The Vocational Education Cost Survey was designed to collect actual cost information on vocational programs from high schools and vocational centers for only one fiscal year, 1981. The survey instrument was divided into two parts. Part one was used to collect costs that applied to support services and part two collected information and costs related to classroom instruction. Individual support service cost items contained in the survey included: general (school) administration, finance and operations, pupil services (guidance, placement, health, and psychological), and other. Classroom instruction cost categories included: teacher salaries, employee benefits, purchased services, supplies and materials, equipment, and other.

The vocational service areas for which cost information was being collected were: Agriculture, Business and Office Education, Health, Home Economics, Marketing and Distributive Education, Prevocational Education, and Trade and Industry. The Trade and Industry service area was subdivided according to the following program offerings: Air Conditioning and Refrigeration, Appliance Repair, Auto Body Repair, Auto Mechanics, Auto Services, Barbering, Building Construction, Business Machine Maintenance, Cabinet Making, Commercial Art, Commercial Photography, Cosmetology, Diversified Occupations, Drafting, Electricity, Electronics, Graphic Communications, Industrial Sewing, Machine Shop, Masonry, Metal Working and Fabrication, Painting and Decorating, Plumbing and Pipefitting, Radio and Television Repair, Sheet Metal, Shoe Repair, Small Engine Repair, Tailoring, Textiles, Tilesetting, and Welding.

In order to ensure a true and complete account of the costs incurred during the 1980-81 school year for each vocational program, respondents were requested to indicate all costs from their fiscal year 1981 records as they pertained to each item regardless of the source of funds. Respondents were expected to supply, as accurately as possible, cost information for each vocational program offered at the institution from which the information was being solicited.

An advance notice letter for the survey was mailed on February 9, 1982 (see Appendix A, page A-7) to each potential respondent prior to the February 17, 1982 mailing of the survey instrument and transmittal letter (see Appendix A, page A-9). A reminder postcard (see Appendix A, page A-11) was sent to all potential respondents one week prior to the March 12, 1982 due date for completed survey forms. In order to differentiate between high school and vocational center respondents, the instruments were color coded white for high schools and blue for vocational centers.

The survey forms were sent to 221 high schools and 56 vocational centers throughout South Carolina. Cost data were returned for 159 high schools at a response rate of 72 percent. However, only seventy-four forms were determined to have sufficient information for use in the study, resulting in a useable return rate of thirty-three percent. Cost data were obtained for forty-seven vocational centers resulting in a useable return rate of eighty-four percent. Individual program response rates are presented in table 1, page 13.

Because of insufficient data or no program offerings, per pupil costs could not be reported for both the high schools and vocational

centers in all service areas. However, sufficient data were obtained to report costs for both types of institutions in the following fourteen areas: Agriculture, Business and Office Education, Home Economics, Marketing and Distributive Education, Prevocational Education, Auto Mechanics, Building Construction, Cosmetology, Electricity, Electronics, Industrial Sewing, Machine Shop, Masonry, and Textiles.

In the following twelve areas sufficient data were available to report per pupil costs for vocational centers but not for high schools: Health, Air Conditioning and Regrigeration, Appliance Repair, Auto Body Repair, Commercial Art, Drafting, Graphic Communications, Plumbing and Pipefitting, Radio and Television Repair, Small Engine Repair, Tailoring, and Welding.

The per pupil cost for Cabinet Making could be calculated for the high school programs but not the vocational center programs because no data were received. Diversified Occupations and Sheet Metal were the only programs for which no costs could be reported for either the high schools or vocational centers.

Once the returned survey forms were determined to be useable, the following procedures were applied to each vocational program in order to determine the per pupil costs. In steps 1 - 5 the first four were taken for each institution independently.

1. Determine the average support service cost for a vocational student in each respondent institution. The total support service cost for vocational education submitted by each institution was divided by the total vocational student enrollment

for the 1980-81 school year. The quotient represents the average support service cost per vocational student within each institution.

2. Determine the total support service cost for each program. The school year 1980-81 enrollment for each program in each institution was multiplied by the average per pupil support service cost.
3. Determine the total cost incurred for each program within each institution. The sum of the following cost categories was calculated for each program by institution: total support service cost, total teacher salaries, total employee benefits, total purchased services, total supplies and materials, total equipment, and total other.
4. Determine the per pupil costs by program for each institution. The total cost for each program within each institution was divided by the total program enrollment.
5. Determine the statewide per pupil cost by program. Each institution's per pupil program cost was listed and ranked in order from highest to lowest. The middle point of the list was then determined by counting to the center cost in the list. When an even number of costs was listed, the middle point was determined by adding the two most central values and dividing the sum by two.

Median values were used to determine the per pupil costs presented in this study. Since the median is the preferred measure of central tendency when there are extreme values in a distribution, it was chosen as the best indicator of typical cost in tnis study.

TABLE 1

Useable Return Response Rates
by Program and Type of Institution

PROGRAM	HIGH SCHOOL Percentage of Useable Survey Forms	VOCATIONAL CENTER Percentage of Useable Survey Forms
Agriculture	38/124 = 31%	21/28 = 75%
Business and Office Education	63/205 = 31%	28/36 = 78%
Health	1/7 = 14%	23/37 = 62%
Home Economics	67/201 = 33%	23/33 = 70%
Marketing and Distributive Education	20/59 = 34%	22/27 = 81%
Prevocational Education	58/182 = 32%	10/11 = 91%
Trade and Industry		
Air Conditioning and Refrigeration	1/5 = 20%	29/39 = 74%
Appliance Repair	0/1	2/2 = 100%
Auto Body Repair	1/4 = 25%	21/26 = 81%
Auto Mechanics	15/32 = 47%	37/54 = 69%
Building Construction	16/31 = 52%	38/55 = 69%
Cabinet Making	2/3 = 67%	0/2
Commerical Art	0/0	3/3 = 100%
Cosmetology	3/5 = 60%	17/30 = 57%
Diversified Occupations	1/2 = 50%	0/0
Drafting	2/7 = 29%	16/23 = 70%
Electricity	6/13 = 46%	32/49 = 65%
Electronics	2/4 = 50%	6/8 = 75%
Graphic Communications	1/3 = 33%	23/27 = 87%
Industrial Sewing	8/14 = 57%	25/34 = 74%
Machine Shop	2/4 = 50%	20/30 = 67%
Masonry	13/32 = 41%	37/49 = 76%
Plumbing and Pipefitting	0/0	11/13 = 85%
Radio and Television Repair	0/1	3/3 = 100%
Sheet Metal	0/0	2/8 = 25%
Small Engine Repair	1/4 = 25%	9/12 = 75%
Tailoring	0/0	2/2 = 100%
Textiles	3/3 = 100%	8/9 = 89%
Welding	3/11 = 27%	29/31 = 94%

SECTION III

FINDINGS

The purpose of this section is to present the findings of the study, based upon the procedures which were outlined in Section II. For the most part, the findings are presented in tabular or figurative form, with appropriate narration included for purposes of clarification.

Figure 1 (Appendix B, pages B-1 to B-5) presents the statewide per pupil costs by program and type of institution. Whenever possible, per pupil cost data are provided for high schools and vocational centers. In a few instances there were insufficient data for reporting. A program having fewer than ten useable survey forms, which represented less than one third of the programs offered in the state for a particular school type, was considered to have insufficient data. The data were also considered insufficient if obtained from only one school.

Figures 2 through 28 (Appendix B, page B-7 to B-33) depict the most typical expenditures reported for each cost category by program and type of institution. As one reviews the information presented in Appendix B, the following important points must be kept in mind:

1. Costs for the categories of salaries and employee benefits, which were collected separately on the survey form, were combined and presented as a single cost in these figures.

2. The survey requested that each respondent indicate the total instructional salary cost for each program in the institution. Therefore, the cost provided by an institution may represent one teacher or several teachers and aides.
3. The typical cost for salaries in an institution may vary considerably from one program to another because of the average number of years teaching experience for a particular group of teachers. Greater years teaching experience for a large number of teachers in an area such as home economics will usually result in a higher total cost in one program than another. Varying costs in this category may also be due to different pay scales among the school districts.
4. The equipment category for some programs may have been affected by the state allocation for replacement of obsolete instructional equipment. In most instances isolated windfalls of funds would have been eliminated by using the median costs. However, if large amounts of state money for equipment were directed to one program, the average costs may be higher than expected particularly when compared to the other programs.

Summary of the Findings

Table 2 is presented on page 19 to summarize the statewide per pupil cost in program areas by type of institution (high schools and vocational centers). Median costs are displayed with corresponding ranges of cost, in parentheses.

A Representative Example of the Per Pupil Cost Distribution in a Particular Program Area

Costs submitted for each institution may vary so much that it is difficult to determine precise statewide costs (per pupil costs) for each program or cost category (e.g., salaries/employee benefits, purchased services, supplies and materials, equipment, and other). To illustrate this point, a typical per pupil program cost among thirty-nine responding high schools for Agriculture is depicted in figure A, page 20.

Among the thirty-nine responding high schools, the per pupil program cost ranges from a low of $587 per pupil to a high of $4,005 per pupil with a median of $1,421 per pupil. In addition, the individual school per pupil program costs may have a relatively even distribution within the range, increasing the difficulty of determining precise costs. As portrayed in figure A, this even distribution of per pupil programs costs is illustrated as follows:

(1) In the $2,500+ category, five institutions reported
(2) In the $2,400 - $2,499 category, one institution reported
(3) In the $1,900 - $1,999 category, two institutions reported
(4) In the $1,800 - $1,899 category, three institutions reported
(5) In the $1,700 - $1,799 category, one institution reported

(6) In the $1,600 - $1,699 category, two institutions reported

(7) In the $1,500 - $1,599 category, two institutions reported

(8) In the $1,400 - $1,499 category, five institutions reported

(9) In the $1,300 - $1,399 category, four institutions reported

(10) In the $1,200 - $1,299 category, two institutions reported

(11) In the $1,100 - $1,199 category, four institutions reported

(12) In the $1,000 - $1,099 category, two institutions reported

(13) In the $700 - $799 category, four institutions reported

(14) In the $600 - $699 category, one institution reported

(15) In the $500 - $599 category, one institution reported

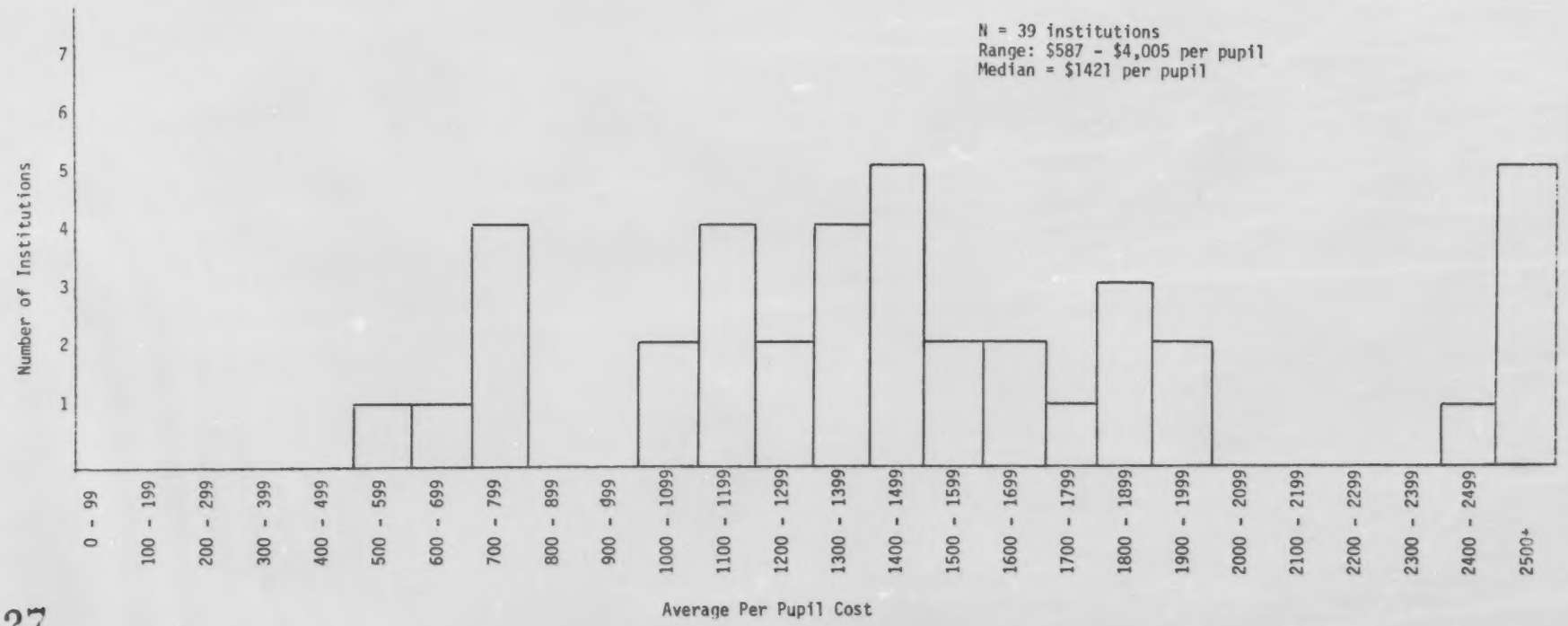
TABLE 2

SUMMARY OF STATEWIDE PER PUPIL MEDIAN COSTS
BY PROGRAM AND TYPE OF INSTITUTION

PROGRAM	HIGH SCHOOL		VOCATIONAL CENTER	
	Total Enrollment from Responding Institutions	Cost (Range)	Total Enrollment from Responding Institutions	Cost (Range)
Agriculture	777	1,421 (587 - 4005)	983	918 (324 - 1838)
Business & Office Education	9,140	438 (104 - 2237)	3,020	1,136 (244 - 2035)
Health	X	NA	851	1,162 (413 - 5163)
Home Economics	8,175	414 (160 - 2210)	1,679	1,000 (215 - 3073)
Marketing & Distributive Ed.	958	551 (262 - 1616)	916	88? (406 - 1889)
Prevocational Education	3,431	373 (215 - 1705)	989	499 (331 - 892)
Trade and Industry				
Air Conditioning & Refrigeration	X	NA	798	1,165 (585 - 2209)
Appliance Repair	X	NA	56	1,276 (1178 - 1373)
Auto Body Repair	X	NA	691	990 (440 - 1722)
Auto Mechanics	555	601 (299 - 1205)	1,400	1,108 (465 - 1630)
Building Construction	504	675 (410 - 1084)	1,212	1,047 (477 - 1827)
Cabinet Making	81	584 (584)	X	NA
Commercial Art	X	NA	77	1,090 (961 - 2188)
Cosmetology	120	1,119 (1045 - 1123)	802	996 (637 - 1468)
Drafting	X	NA	577	1,188 (674 - 1850)
Electricity	194	862 (360 - 1575)	937	1,136 (740 - 2129)
Electronics	41	1,132 (1049 - 1605)	174	1,031 (779 - 1875)
Graphic Communications	X	NA	752	1,218 (623 - 1778)
Industrial Sewing	219	760 (482 - 939)	829	1,038 (452 - 1996)
Machine Shop	68	1,052 (838 - 1265)	677	1,303 (522 - 2093)
Masonry	323	759 (475 - 1549)	1,318	1,071 (542 - 1722)
Plumbing & Pipefitting	X	NA	234	1,429 (935 - 2877)
Radio & Television Repair	X	NA	73	1,419 (1409 - 1704)
Small Engine Repair	X	NA	314	864 (371 - 1182)
Tailoring	X	NA	62	947 (923 - 971)
Textiles	87	814 (603 - 1049)	238	1,224 (529 - 2257)
Welding	X	NA	1,086	1,093 (518 - 2290)

Figure A

A Representative Example of the Per Pupil Cost Distribution in a Particular Program Area (Agriculture)



SECTION IV

CONCLUSIONS AND RECOMMENDATIONS

Organization of this Section

This section is divided into two parts, conclusions and recommendations. Each part is addressed separately.

Conclusions

1. Costs for providing vocational training to secondary school students in South Carolina differ substantially from institution to institution and from program to program within each institution.

2. The median per pupil cost per vocational program, as reported in this study, does represent the most current, accurate cost that can be obtained from information submitted by the local educators for the purpose of this particular study.

3. Comparisons cannot be made between high school and vocational center cost data because a substantial difference exists between the high useable response rate of vocational centers and the low useable response rate of high schools (a rate which is insufficient for generalizing the findings statewide).

4. Even though the high school cost data cannot be generalized statewide, it appears that vocational center program costs are higher in eleven of the fourteen programs for which data are available for both types of institutions.

Recommendations

1. Because of inflationary factors; higher wages; increasing supplies, materials, and services costs; and, greater educational administration expenses, the fiscal management affairs of the local school administrators are becoming awesome. The development of a cost management handbook for local administrators should be considered as a joint venture between state and local vocational educators and accounting experts to help administrators cope with these problems.

2. The Office of Vocational Education and local administrators should identify ways that each level of educational administration can economize without losing program quality or jeopardizing the relevancy of programs. In addition, the administrators should examine ways to effectively and reasonably reduce vocational costs with minimal loss of service to the students, business and industry, and the community.

3. All vocational programs should be subdivided, as was Trade and Industry, into individual program components in order that per pupil costs may be determined at the lowest possible program level. This information would enable state and local administrators to determine cost differences among each program within each service area. Furthermore, such information would help eliminate potential cost distortions which may occur by combining all of the costs within a service area.

4. Since two programs had insufficient information from which to determine per pupil costs for high schools or vocational centers and thirteen other programs had sufficient information to determine per pupil costs for only one type of institution (high school or vocational center), consideration should be given to finding the costs for these programs. The programs are: Health (high schools), Air Conditioning and Refrigeration (high schools), Appliance Repair (high schools), Auto Body Repair (high schools), Cabinet Making (vocational centers), Diversified Occupations (high schools), Drafting (high schools), Graphic Communications (high schools), Radio and Television Repair (high schools), Small Engine Repair (high schools), and Welding (high schools).

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Hu, T. W. Studies of the Cost-Efficiency and Cost-Effectiveness of Vocational Education. Information Series No. 202. Columbus, Ohio: National Center for Research in Vocational Education, Ohio State University, 1980.

Kim, J. E. Cost-Effectiveness/Benefit Analysis of Postsecondary Vocational Programs. Administrator's Manual. Bloomington, Indiana: Indiana University, 1977.

Shoemaker, B. R. Secondary Vocational Education Instructional Program Costs. School Year 1979 - 1980. An Update of 1975 Study. Columbus, Ohio: Ohio Department of Education, 1980.

Thompson, M. S. Benefit-Cost Analysis for Program Evaluation. Beverly Hills, California: Sage Publications, 1980.

APPENDIX A

VOCATIONAL EDUCATION COST SURVEY

General Information: This survey instrument is designed to collect vocational cost information from local school district personnel. The items used have been selected from the Finance Accounting Handbook, 1977, developed by the South Carolina State Department of Education, Office of Finance. Information submitted by respondents should correspond to the function and object descriptions in the handbook. In some instances examples have been included for clarity. All cost information should be obtained from fiscal year 1981 records only.

In order to ensure accurate and complete costs, respondents are requested to reflect all costs as they pertain to each item, regardless of the source of funds used. For example, if supplies and materials for a program are purchased from the general account and the pupil activity account, add amounts spent for the program and insert the total in the appropriate space provided.

The survey instrument is divided into two parts. Part one will be used to collect costs that apply to support services and part two will collect information and costs related to classroom instruction. Respondents are requested to supply cost information for each vocational program offered at the institution from which the information is being solicited.

Please follow the instructions carefully for each section of the instrument. If you have questions please call Gregory G. Morrison, Supervisor, Research Coordinating Unit, 758-2358.

PART I - SUPPORTING SERVICES

Instructions: Each of the categories below has been selected from the Financial Accounting Handbook (FAH). Identified within each category are the items and corresponding FAH account numbers for the items which should be reflected in the total. Please insert the total for each category in the space provided. Amounts should be rounded to the nearest dollar.

1. Pupil Services for Vocational Education (210) — TOTAL EXPENDITURES $_____
   212 - Guidance Services (objects 110-690)
   213 - Health Services (objects 110-690)
   214 - Psychological Services (objects 110-690)
   216 - Placement Services (objects 110-690)

2. General Administration for Vocational Education (230) — TOTAL EXPENDITURES $_____
   233 - School Administration (objects 110-690)

3. Finance and Operations for Vocational Education (250) — TOTAL EXPENDITURES $_____
   252 - Fiscal Services (objects 110-690)
   254 - Operation and Maintenance of Plant (objects 110-690)
   257 - Internal Services (objects 110-690)

4. Other - (If there are other items that may be classified as support services and are applicable but not mentioned in the preceeding categories, list them below. Please follow the format above--indicate the code and title for each item and place the total in the space provided). — TOTAL EXPENDITURES $_____

CODE	TITLE	OBJECT NO.(s)	
_____	_____	_____	TOTAL EXPENDITURES $_____
_____ _____	_____	_____	$_____

SDE 26-220-00
(This form becomes obsolete 6/30/82.)

PART II - INSTRUCTION

Instructions: This form is divided into two sets of items. One set (General) requests general information about each program and the other set (Cost) requests information about expenditures related to each program. Within the General category please indicate the total for each item and each program offered in your institution. Items under the Cost category were selected from the Financial Accounting Handbook (FAH). The titles and codes are consistent with the descriptions therein. Please include as applicable, the total expenditures for each item by program. The totals should reflect expenditures for each of the objects listed under the items. Space has been provided to add Trade & Industry programs not included on the form.

ITEM	PROGRAM					
	AGRICULTURE	BUSINESS AND OFFICE EDUCATION	HEALTH OCCUPATIONS	MARKETING AND DISTRIBUTIVE EDUCATION	PREVOCATIONAL	HOME ECONOMICS
GENERAL:						
1. Number of Vocational Classrooms/Labs						
2. Total Vocational Instruction Space (Sq. Ft.)						
COST:						
115 - Vocational Programs						
1. 100 - SALARIES for vocational instruction personnel (objects 110-130). If a teacher spends 80% of the time teaching in one program (i.e. Agriculture) and 20% of the time teaching in another program (i.e. Prevocational) the salary should be divided accordingly and each amount placed under the appropriate program heading.						
2. 200 - EMPLOYEE BENEFITS for vocational instruction personnel (objects 210-290)						
3. 300 - PURCHASED SERVICES for vocational instruction purposes (objects 311, 312, 323, 332, 339, 340, 390)						
4. 400 - SUPPLIES AND MATERIALS related to vocational instruction (objects 410-450 and 490). Object 490 should include consumable instructional supplies such as food stuffs for home economics projects or wood for carpentry projects, etc. Include curriculum guides and handbooks as appropriate. If supplies or materials have been donated for use in a program, calculate a dollar value for them.						
5. 500 - EQUIPMENT for instruction (objects 540, 550, 590). The replacement of tools, instruments, and accessories should be placed here.						
6. 600 - OTHER OBJECTS related to instruction costs (object 690). Include instructional equipment maintenance costs in this category.						

SDE 26-220-00
(This form becomes obsolete 6/30/82.)

PART II - INSTRUCTION (Continued)

ITEM	TRADE & INDUSTRY PROGRAM																	
	DvstOcc 17.9900	GraComm 17.1900	IndSew 17.3399	MachSh 17.2302	Msnry 17.1004	MtlWk/b 17.2301	PtgDec 17.1005	PlmPpft 17.1007	Ra&TvRp 17.1503	ShtMtl 17.2305	SmEngRp 17.3100	Trlng 17.3302	Txtls 17.3300	TlStg 17.1004	Shoe Rp 17.9900	Welding 17.2306		
GENERAL:																		
1. Number of Vocational Classrooms/Labs																		
2. Total Vocational Instruction Space (Sq. Ft.)																		
COST:																		
115 - Vocational Programs																		
1. 100 - SALARIES for vocational instruction personnel (objects 110-130). If a teacher spends 80% of the time teaching in one program (i.e. Agriculture) and 20% of the time teaching in another program (i.e. Prevocational) the salary should be divided accordingly and each amount placed under the appropriate program heading.																		
2. 200 - EMPLOYEE BENEFITS for vocational instruction personnel (objects 210-290)																		
3. 300 - PURCHASED SERVICES for vocational instruction purposes (objects 311, 312, 323, 332, 339, 340, 390)																		
4. 400 - SUPPLIES AND MATERIALS related to vocational instruction (objects 410-450 and 490). Object 490 should include consumable instructional supplies such as food stuffs for home economics projects or wood for carpentry projects, etc. Include curriculum guides and handbooks as appropriate. If supplies or materials have been donated for use in a program, calculate a dollar value for them and include under code 490.																		
5. 500 - EQUIPMENT for instruction (objects 510, 550, 590). The replacement of tools, instruments, and accessories should be placed under object 590.																		
6. 600 - OTHER OBJECTS related to instruction costs (object 690). Include instructional equipment maintenance costs in this category.																		

SDE 26-220-00
(This form becomes obsolete 6/30/82.)

PART II - INSTRUCTION (Continued)

ITEM	TRADE AND INDUSTRY PROGRAM															
	A/CRef 17.0100	Apl Rp 17.0200	Aut Bdy 17.0301	Aut Mec 17.0302	Aut Svc 17.0399	Barber 17.2601	Cosmet 17.2602	Draft 17.1300	Electry 17.1002	Electrn 17.1500	BldgCon 17.1001	DslMaMnt 17.0600	Cabtkg 17.3601	Comfrt 17.0700	Comfty 17.0900
GENERAL:																
1. Number of Vocational Classrooms/Labs																
2. Total Vocational Instruction Space (Sq. Ft.)																
COST:																
115 - Vocational Programs																
1. 100 - SALARIES for vocational instruction personnel (objects 110-130). If a teacher spends 80% of the time teaching in one program (i.e. Agriculture) and 20% of the time teaching in another program (i.e. Prevocational) the salary should be divided accordingly and each amount placed under the appropriate program heading.																
2. 200 - EMPLOYEE BENEFITS for vocational instruction personnel (objects 210-290)																
3. 300 - PURCHASED SERVICES for vocational instruction purposes (objects 311, 312, 323, 332, 334, 340, 390)																
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5. 500 - EQUIPMENT for instruction (objects 540, 550, 590). The replacement of tools, instruments, and accessories should be placed under object 590.																
6. 600 - OTHER OBJECTS related to instruction costs (object 690). Include instructional equipment maintenance costs in this category.																

OMB 76-220-00
(This form becomes obsolete 6/30/82.)

O.E. CODE	COMPLETE TITLES
17.0100	Air Conditioning and Refrigeration
17.0200	Appliance Repair
17.0301	Auto Body
17.0302	Auto Mechanics
17.0399	Auto Services
17.2601	Barbering
17.2602	Cosmetology
17.1300	Drafting
17.1002	Electricity
17.1500	Electronics
17.1001	Building Construction
17.0600	Business Machine Maintenance
17.3601	Cabinet Making
17.0700	Commercial Art
17.0900	Commercial Photography
17.9900	Diversified Occupations
17.1900	Graphic Communications
17.3399	Industrial Sewing
17.2302	Machine Shop
17.1004	Masonry
17.2304	Metal Working and Fabrication
17.1005	Painting and Decorating
17.1007	Plumbing and Pipefitting
17.1503	Radio and Television Repair
17.2305	Sheet Metal
17.3100	Small Engine Repair
17.3302	Tailoring
17.3300	Textiles
17.1004	Tilesetting
17.9900	Shoe Repair
17.2306	Welding

STATE OF SOUTH CAROLINA
DEPARTMENT OF EDUCATION
COLUMBIA 29201

Charlie G. Williams
State Superintendent of Education

A-7

February 9, 1982

Dear Educator:

Educational administrators throughout the nation and state at every conceivable level of responsibility are often asked: "How much does it cost to educate a student?" Educators in South Carolina are particularly concerned about cost because the expenses incurred to establish and maintain a complete and relevant vocational program are considerably higher in some instances than for many other programs. Because of a wide variation in the costs among the different vocational programs, a single average cost for vocational education has proven inadequate and less than representative when evaluating expenditures among the programs. Therefore, the Office of Vocational Education is conducting a study to determine the difference in the costs related to maintaining each vocational program area offered in the South Carolina schools.

The Office of Vocational Education has designed the study and survey instrument for the project in cooperation with an advisory committee composed of district superintendents, vocational directors, and personnel from the Office of Finance.

In the next few days you will receive the survey form asking you to report your FY 1981 expenditures of vocational funds for selected items by program area. You will be asked to give the costs without regard to funding source. It is the purpose of this study to obtain the most accurate and complete cost information possible; thus, your cooperation and assistance is critical.

The results of this study should enable planners from the local district level to the state level to compare and evaluate the cost effectiveness of each vocational program even more accurately, based on systematically derived statewide data. Also, all concerned vocational groups will have access to data that will help improve the total vocational education delivery system.

This project is essential to effective statewide and local level planning. Your contribution is needed. Thank you for your cooperation.

Sincerely,

Moody Oswald

Moody Oswald, Director
Office of Vocational Education

gtw

pc: School Superintendents

STATE OF SOUTH CAROLINA
DEPARTMENT OF EDUCATION
COLUMBIA 29201

Charlie G. Williams
State Superintendent of Education

A-9

February 17, 1982

Dear Educator:

A few days ago you received a letter from me explaining that a study is being conducted by the Office of Vocational Education to determine the differences in the costs related to maintaining each secondary school vocational program offered in South Carolina.

Attached you will find the survey form referred to in my previous letter and a copy of that communication. Please review the form carefully, complete it, and return it in the enclosed self-addressed envelope by March 12, 1982.

Each survey form has been coded with the appropriate school identification number. This is only for follow-up correspondence and to enable the staff to use as much existing data from State Department of Education records as possible. The data received from each institution will be kept confidential and used only for the purpose of this study.

Your cost information is critical to this effort in order for the study to accurately reflect vocational programs costs. If you have any questions or need additional information, please contact Gregory G. Morrison at 758-2358.

In order to help you decode the T & I program titles on pages 3 and 4 of the survey forms, a list has been provided of the complete titles and OE codes.

Thank you for your cooperation and assistance.

Sincerely,

Moody Oswald

Moody Oswald, Director
Office of Vocational Education

gtw

Attachments

POSTCARD

On February 17, 1982 you were sent a survey form entitled "Vocational Education Cost Survey." Please remember that the forms are due on March 12, 1982.

Your cooperation and participation is very important to the study. Only you can provide us with an accurate account of the money being spent for vocational education. The data and information you provide will help ensure the accuracy and reliability of the findings.

Thank you for your support. If you have any questions call Gregory G. Morrison at 758-2358.

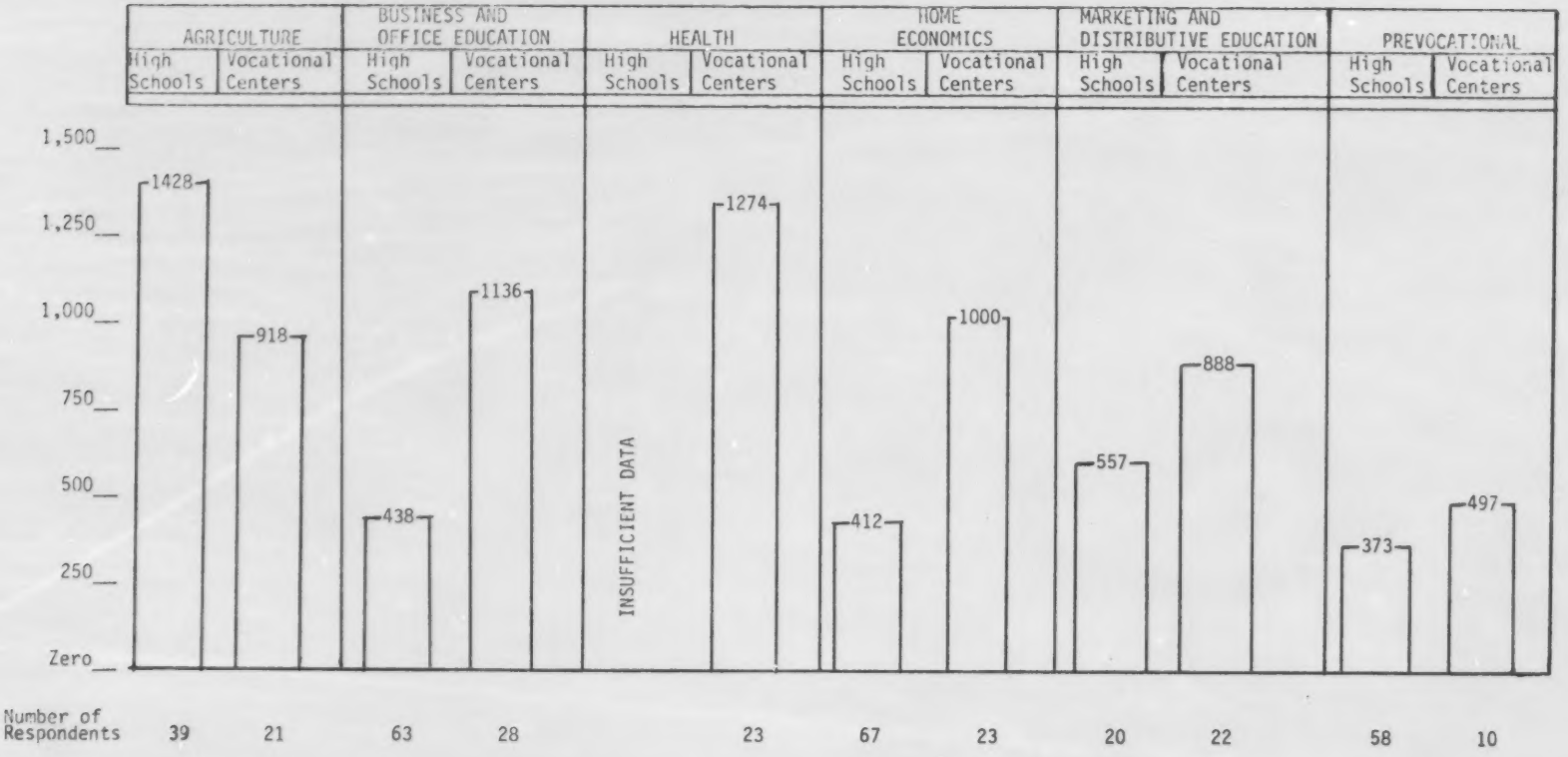
Moody Oswald

Moody Oswald, Director
Office of Vocational Education

APPENDIX B

Figure 1

Statewide Per Pupil Median Costs
By Program and Type of Institution



B-1

Figure 1 -- Continued

Statewide Per Pupil Median Costs
By Program and Type of Institution

TRADE & INDUSTRY

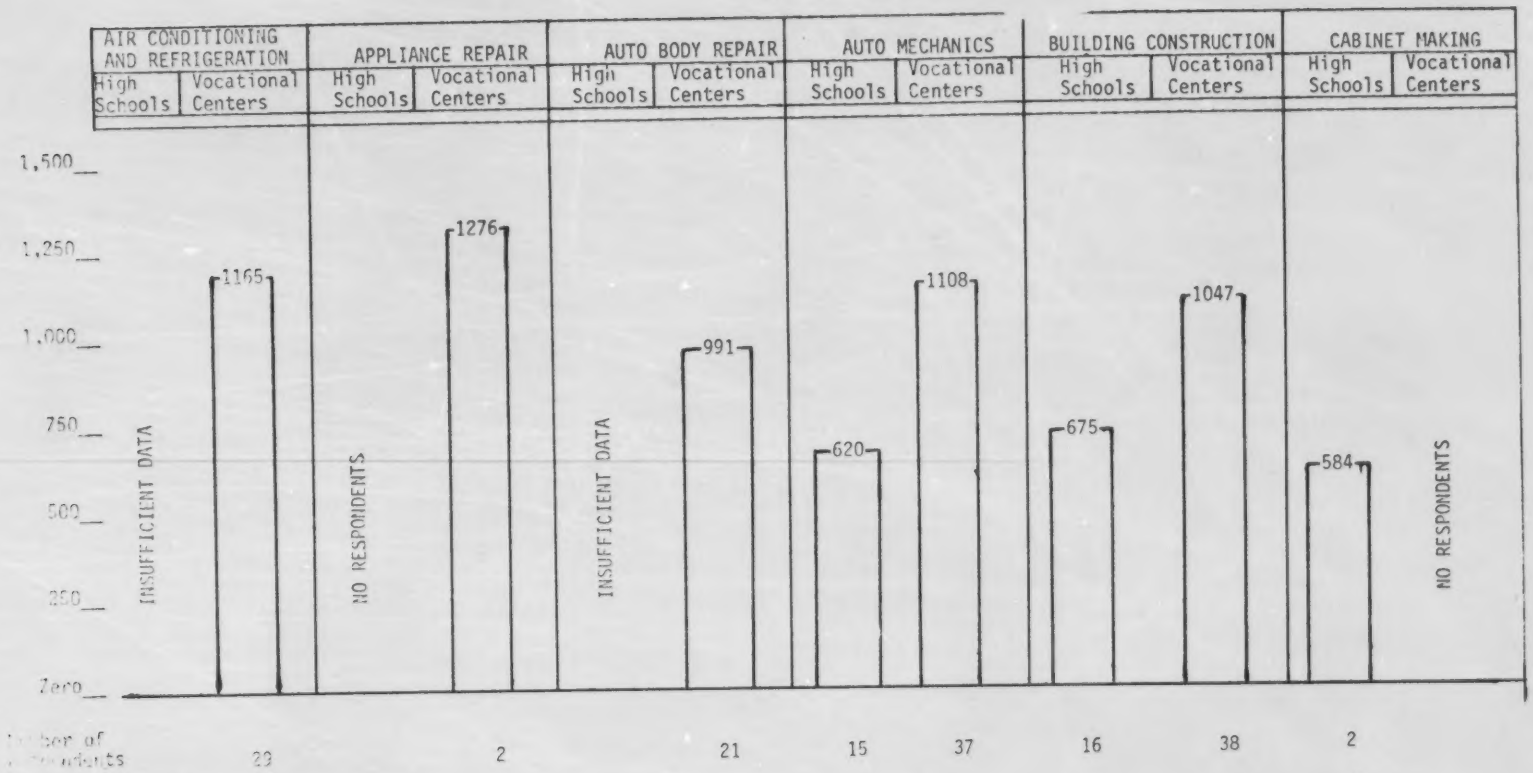


Figure 1 -- Continued

Statewide Per Pupil Median Costs
By Program and Type of Institution

TRADE & INDUSTRY

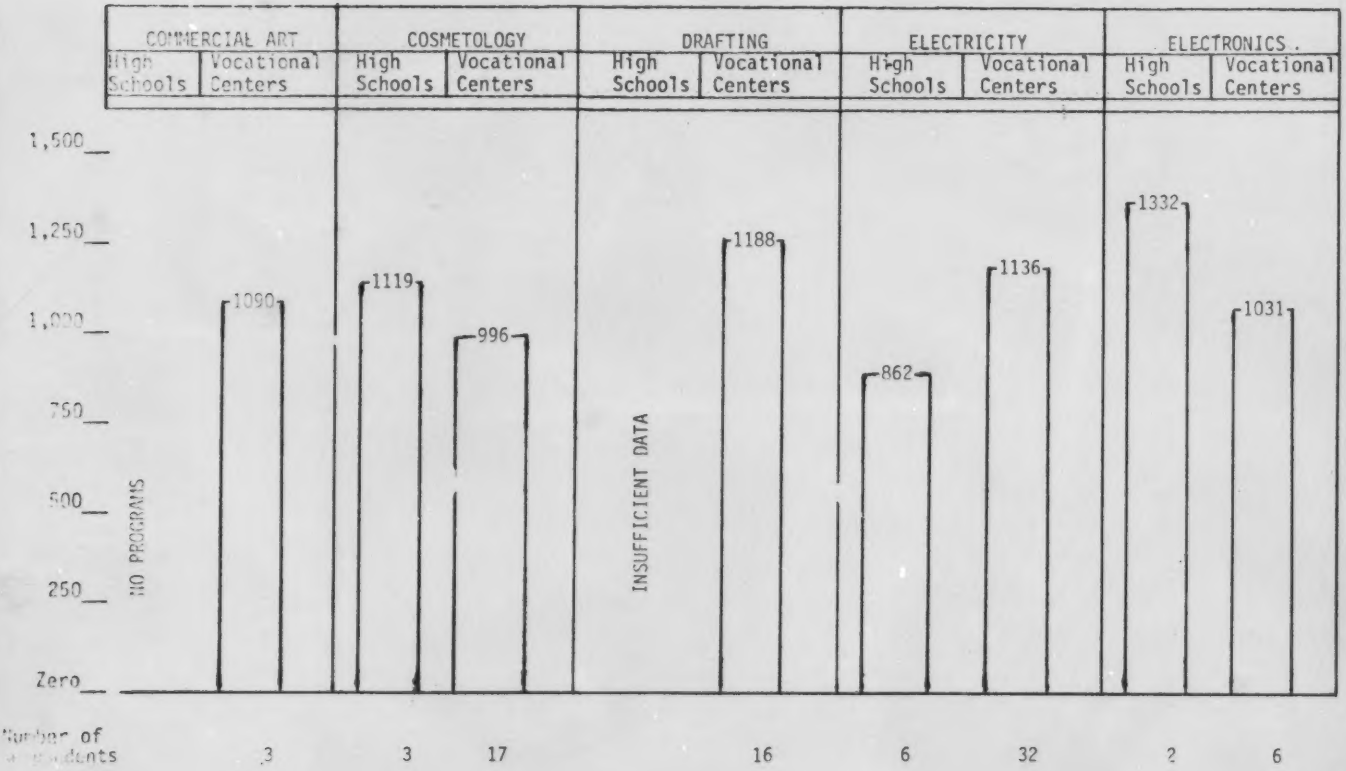


Figure 1 -- Continued

Statewide Per Pupil Median Costs
By Program and Type of Institution

TRADE & INDUSTRY

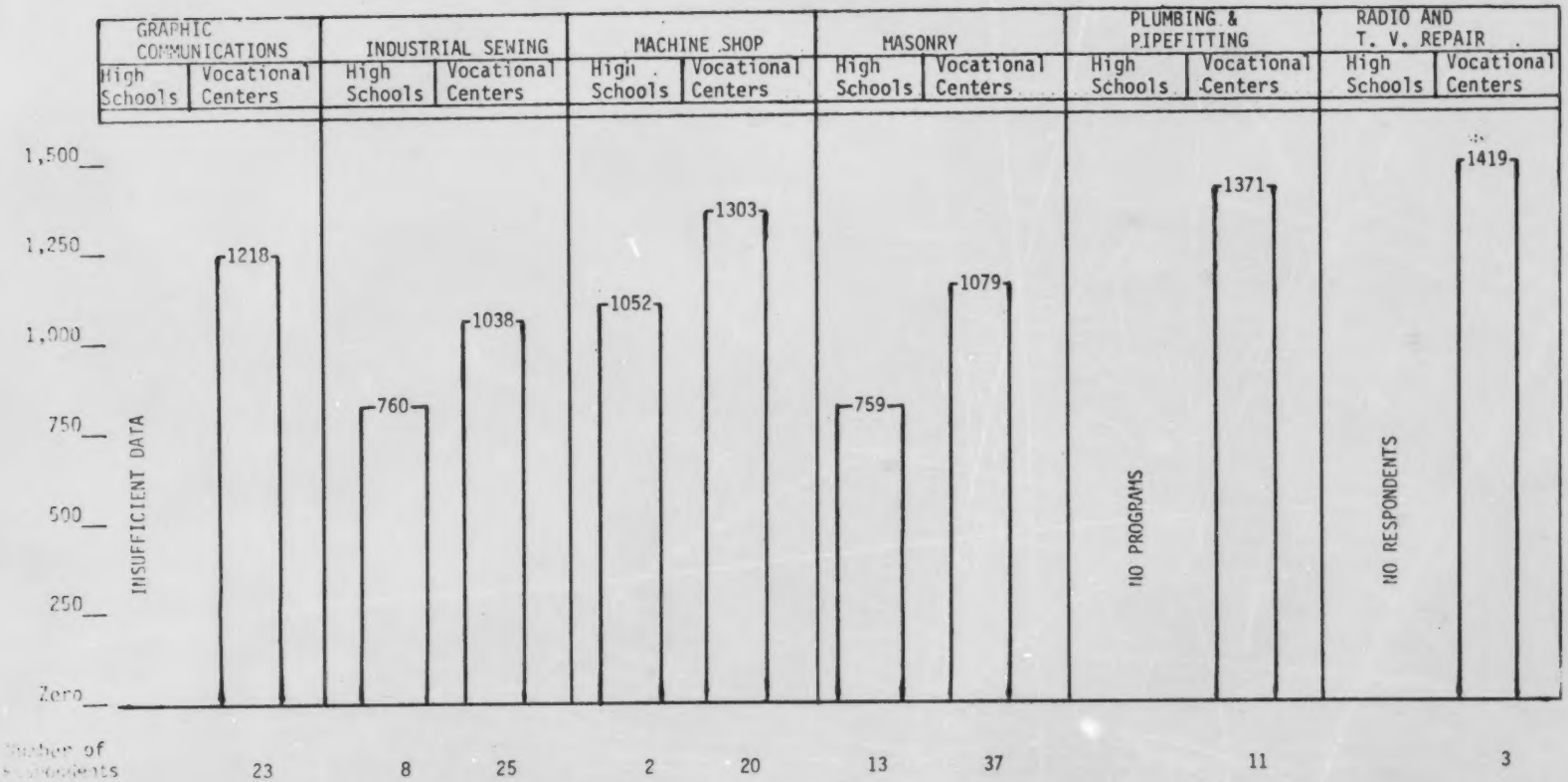
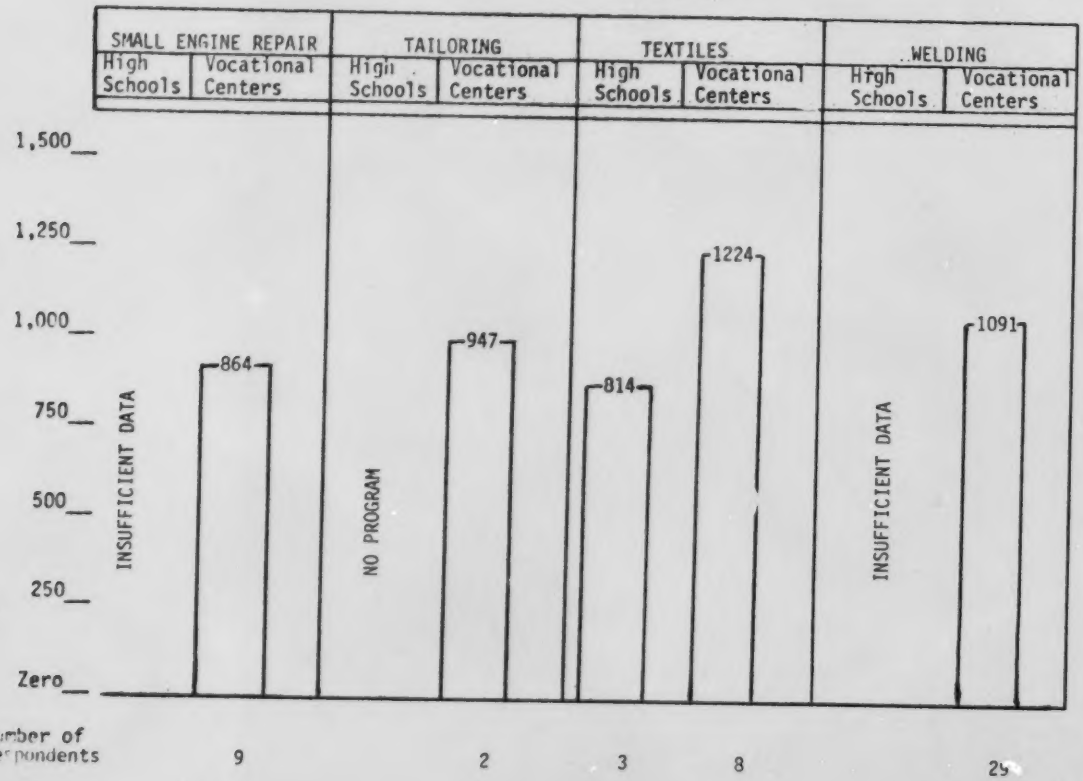


Figure 1 -- Continued

Statewide Per Pupil Median Costs
By Program and Type of Institution

TRADE & INDUSTRY



INDEX OF COST CATEGORY FIGURES BY PROGRAM

PROGRAM	FIGURE NO.	PAGE NO.
Agriculture	2	B-7
Business and Office Education	3	B-8
Health	4	B-9
Home Economics	5	B-10
Marketing and Distributive Education	6	B-11
Prevocational Education	7	B-12
Trade and Industry		
Air Conditioning and Refrigeration	8	B-13
Appliance Repair	9	B-14
Auto Body Repair	10	B-15
Auto Mechanics	11	B-16
Building Construction	12	B-17
Cabinet Making	13	B-18
Commercial Art	14	B-19
Cosmetology	15	B-20
Drafting	16	B-21
Electricity	17	B-22
Electronics	18	B-23
Graphic Communications	19	B-24
Industrial Sewing	20	B-25
Machine Shop	21	B-26
Masonry	22	B-27
Plumbing and Pipefitting	23	B-28
Radio and Television Repair	24	B-29
Small Engine Repair	25	B-30
Tailoring	26	B-31
Textiles	27	B-32
Welding	28	B-33

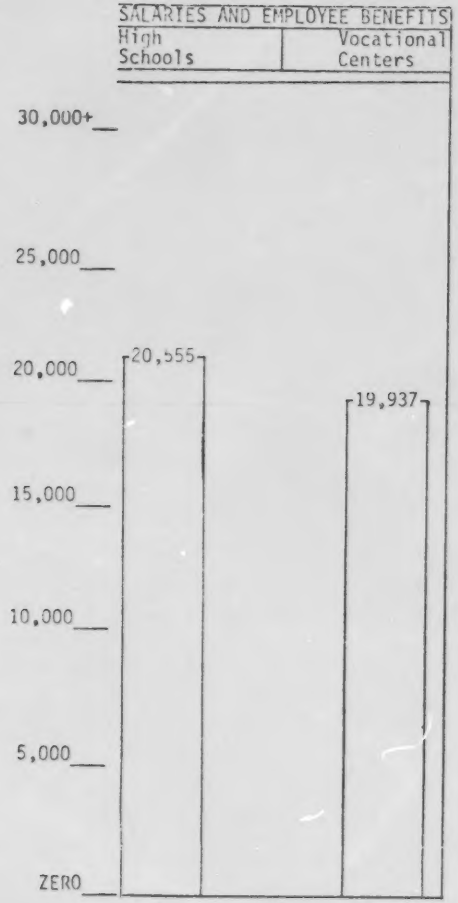
NOTE: The cost category index might be used by the reader to easily find the median cost, range, and number of respondents for each program area in vocational education.

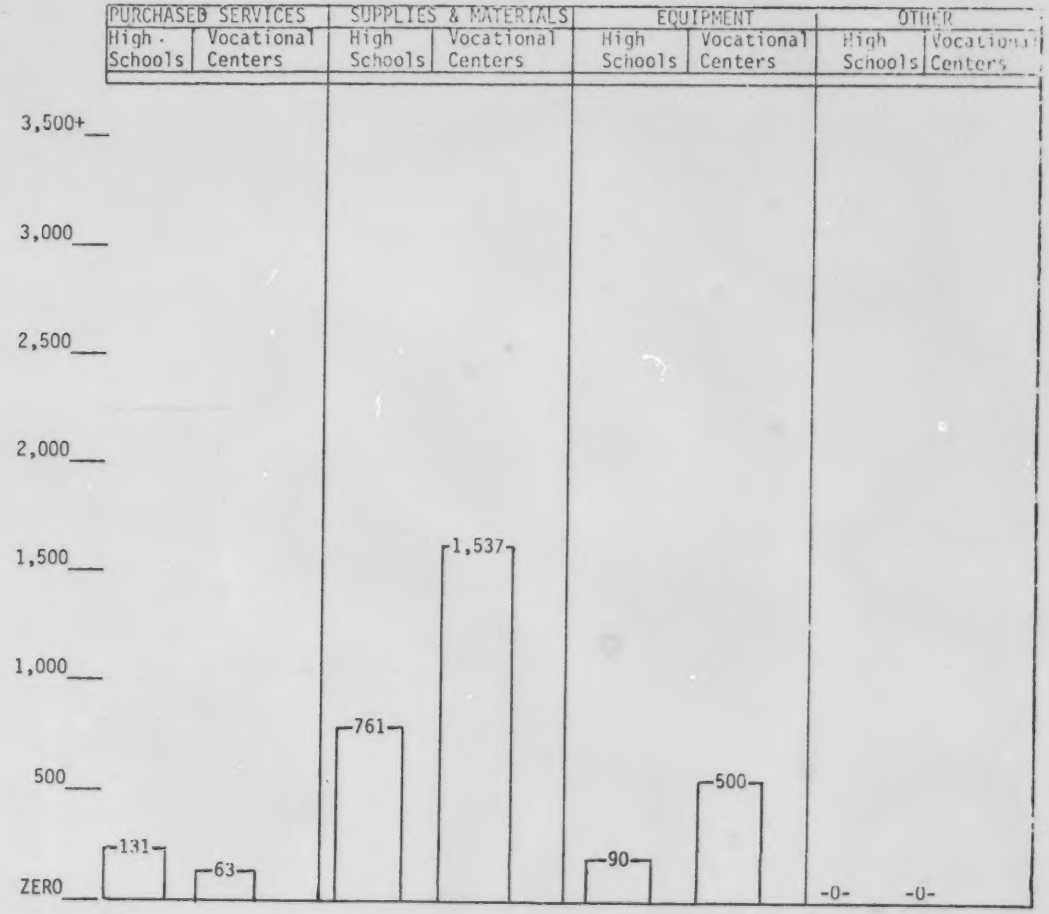
Figure 2

Medians For Each Cost Category By Program

AGRICULTURE — PROGRAM

01.0000 — O. E. CODE





	High Schools	Vocational Centers
Range	6,953 - 44,570	3,622 - 55,020
Number of Respondents	39	21

	High Schools	Vocational Centers
Purchased Services	0 - 2,544	0 - 10,050
Supplies & Materials	0 - 4,850	581 - 13,520
Equipment	0 - 4,330	0 - 12,634
Other	0 - 5,756	0 - 4,094

B-7

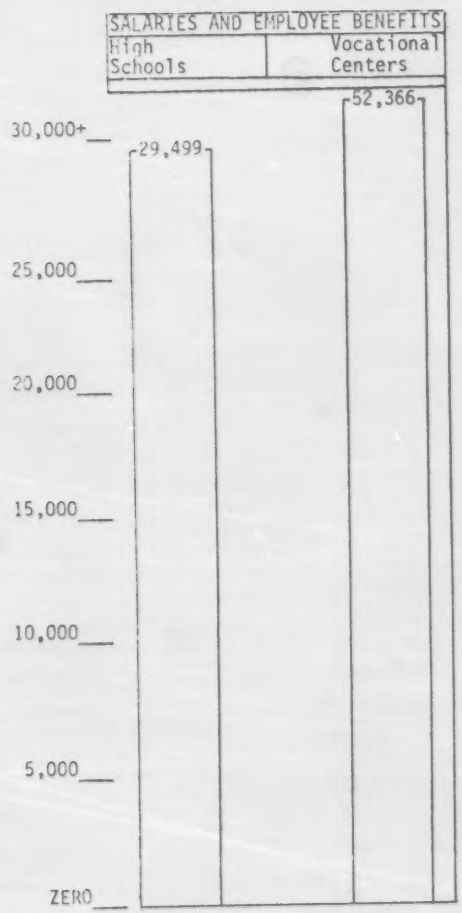
Figure 3

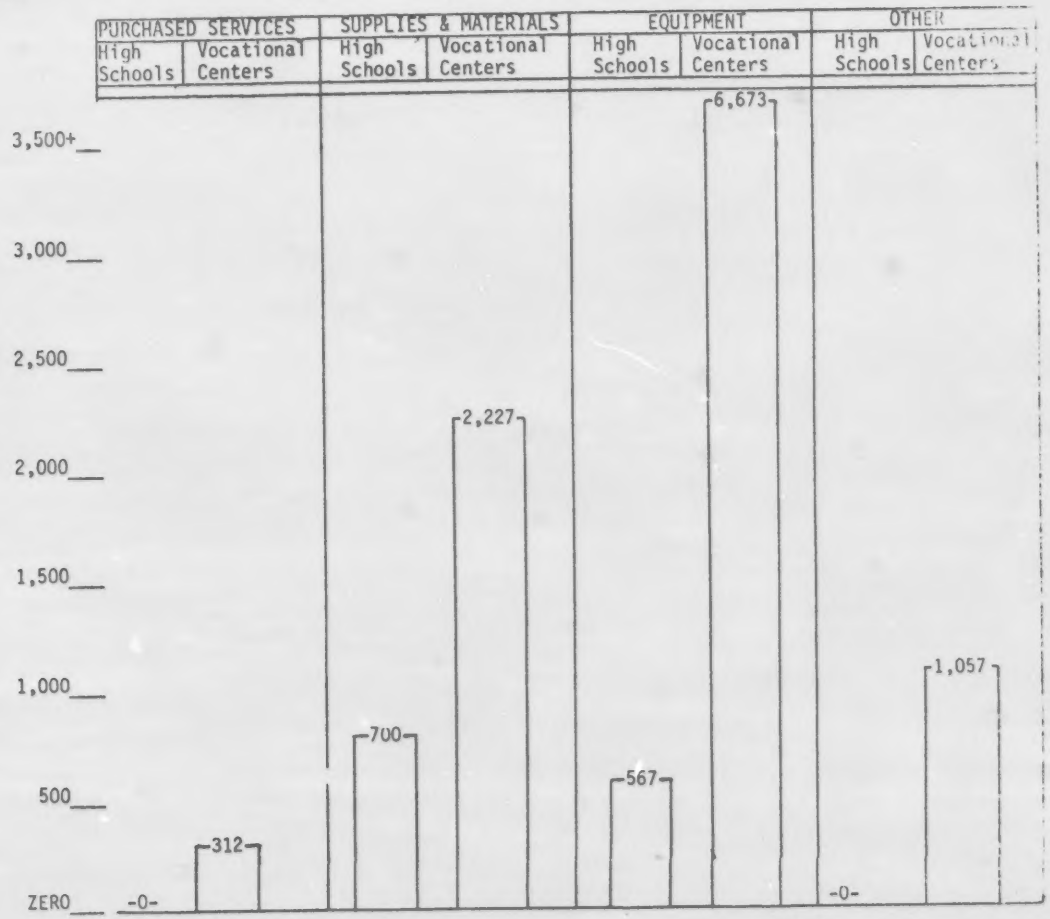
Medians For Each Cost Category By Program

BUSINESS AND OFFICE EDUCATION
PROGRAM

14.0000
O. E. CODE

B-8





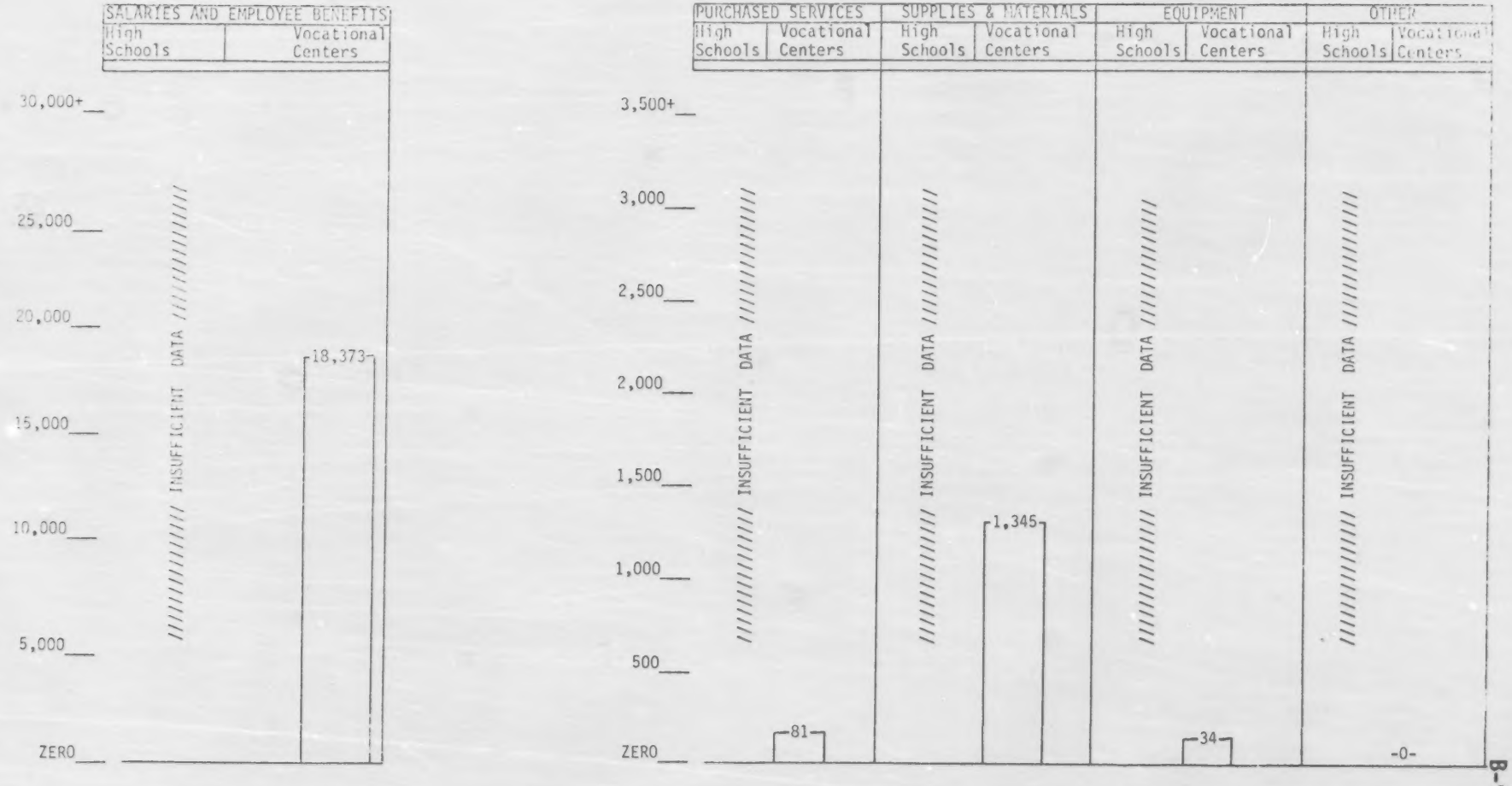
	PURCHASED SERVICES		SUPPLIES & MATERIALS		EQUIPMENT		OTHER	
	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers
Range	0 - 3,368	0 - 8,100	0 - 16,848	581 - 11,139	0 - 25,351	0 - 26,240	0 - 4,200	0 - 20,605
Number of Respondents	63	28						

Figure 4

Medians For Each Cost Category By Program

HEALTH OCCUPATIONS PROGRAM

07.0000 O. E. CODE



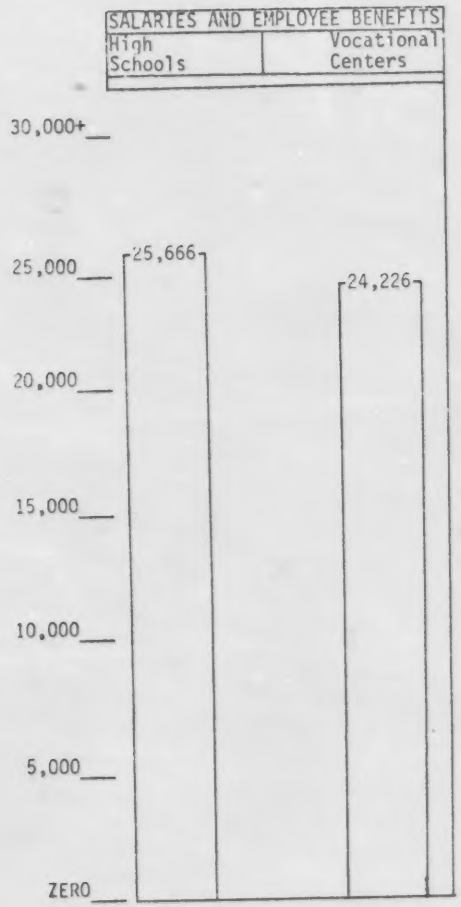
Range	13,166 - 58,565		0 - 7,600	102 - 7,748	0 - 1,1461		0 - 793	
Number of Respondents	1	23						

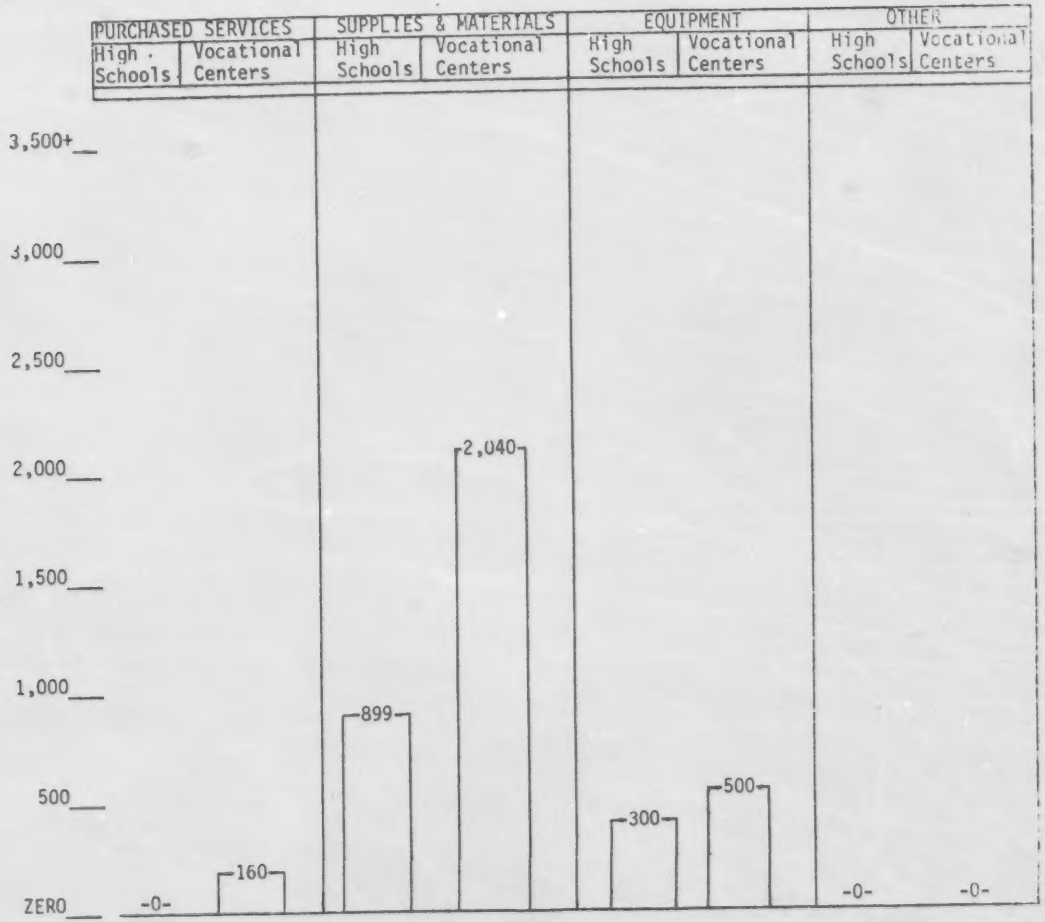
Figure 5

Medians For Each Cost Category By Program

HOME ECONOMICS PROGRAM

09.0100 + 0200 O. E. CODE





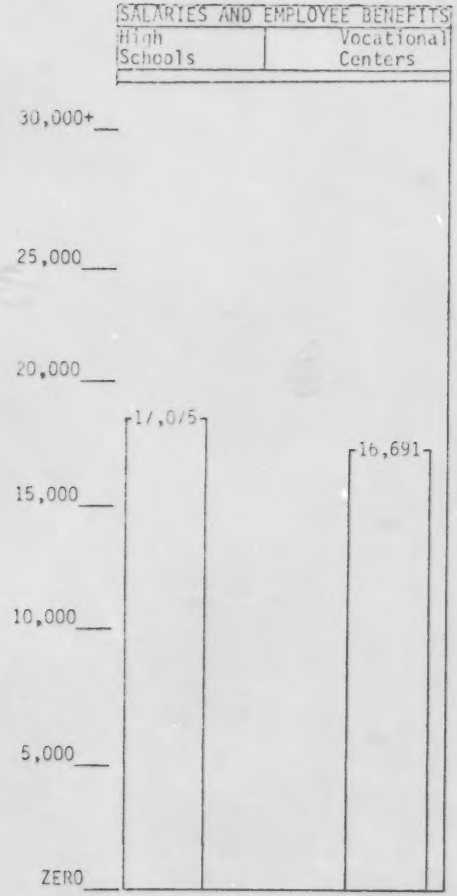
	High Schools	Vocational Centers
Range	2,906 - 99,736	3,542 - 152,457
Number of Respondents	67	23

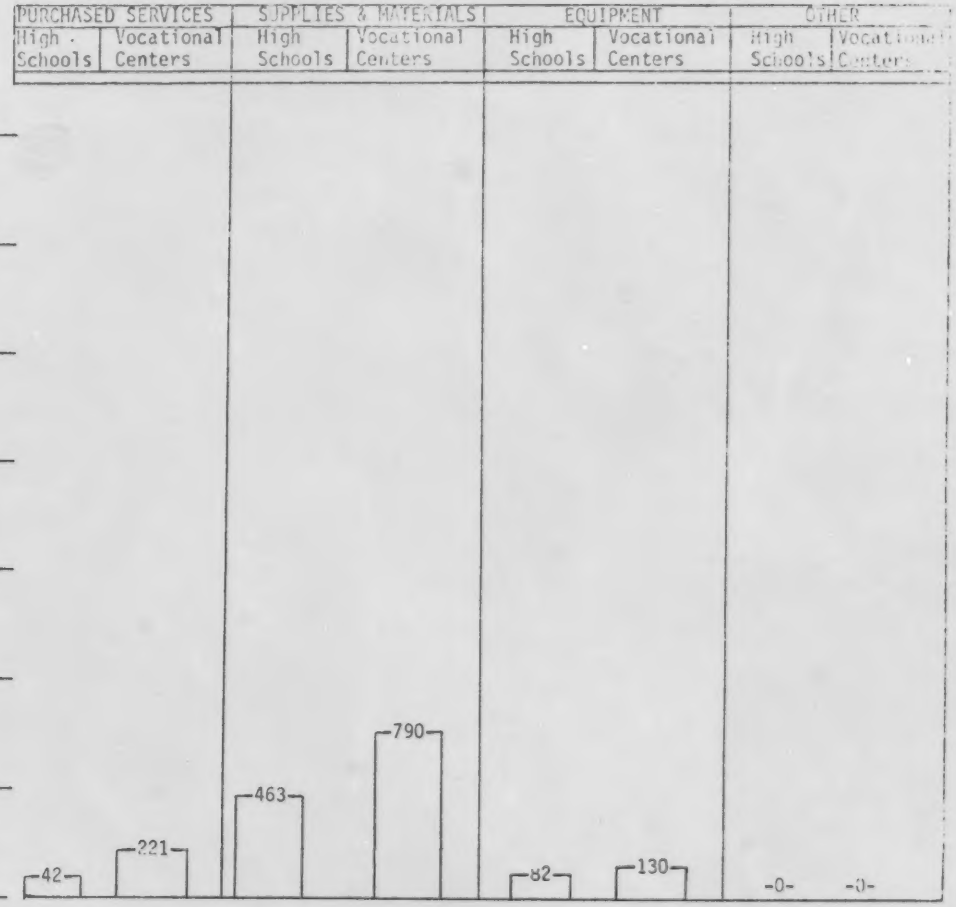
	High Schools	Vocational Centers
PURCHASED SERVICES	0 - 3,368	0 - 1,800
SUPPLIES & MATERIALS	0 - 8,123	595 - 12,774
EQUIPMENT	0 - 6,809	0 - 3,991
OTHER	0 - 16,500	0 - 5,769

Figure 6

Medians For Each Cost Category By Program

MARKETING AND DISTRIBUTIVE EDUCATION (PROGRAM) 04.0000 (O. E. CODE)





	High Schools	Vocational Centers
Range	1,810 - 55,603	12,689 - 43,698
Number of Respondents	20	22

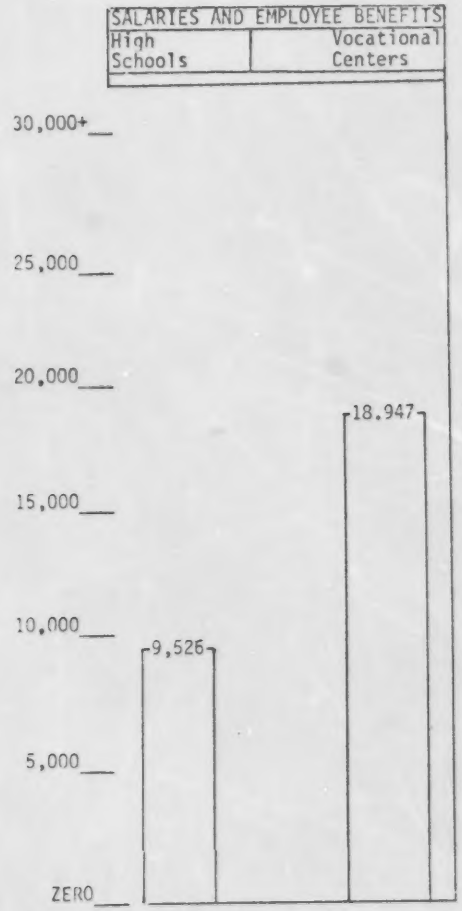
	High Schools	Vocational Centers
PURCHASED SERVICES	0 - 3,368	0 - 27,500
SUPPLIES & MATERIALS	198 - 6,082	200 - 6,869
EQUIPMENT	0 - 1,000	0 - 2,186
OTHER	0 - 3,256	0 - 500

Figure 7

Medians For Each Cost Category By Program

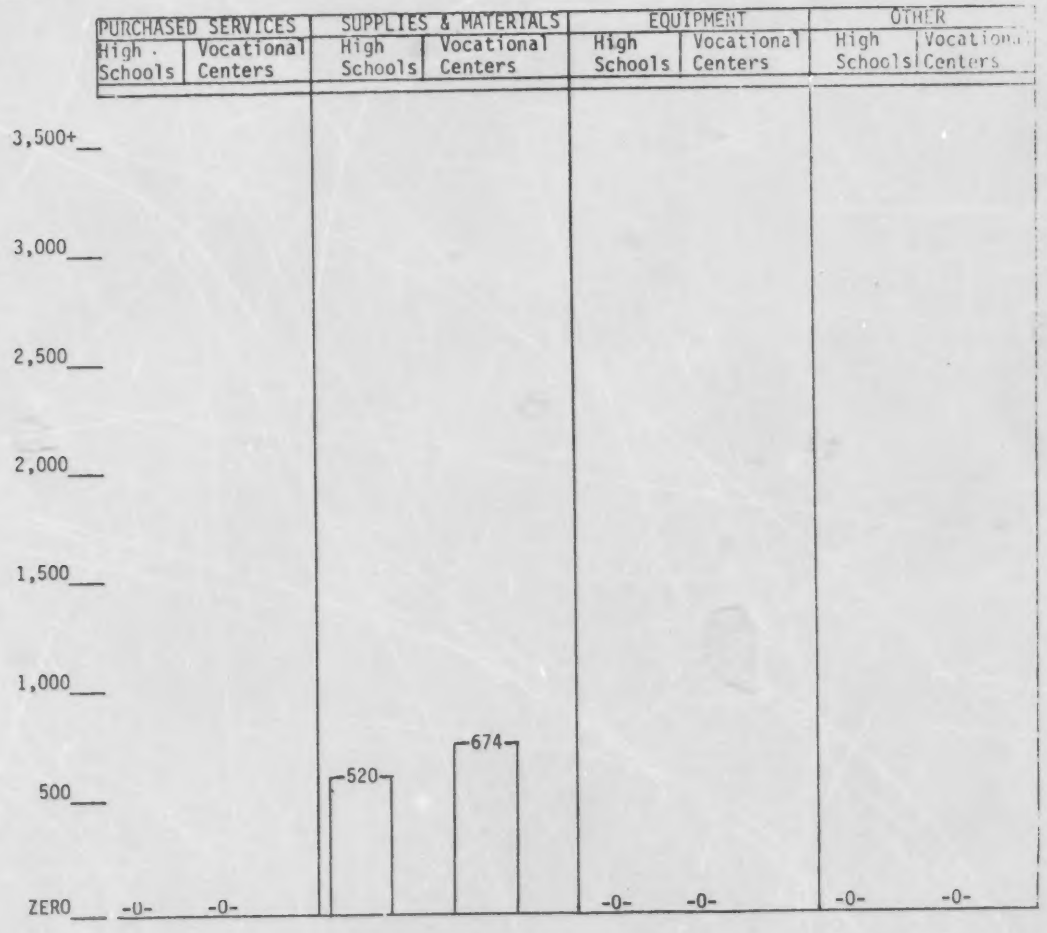
PREVOCATIONAL EDUCATION
PROGRAM

99.0100
O. E. CODE



Range 2,468 - 75,585
6,891 - 53,247

Number of Respondents 58
10



0 - 3,368
0 - 4,200

0 - 3,600
0 - 4,089

0 - 6,156
0 - 4,410

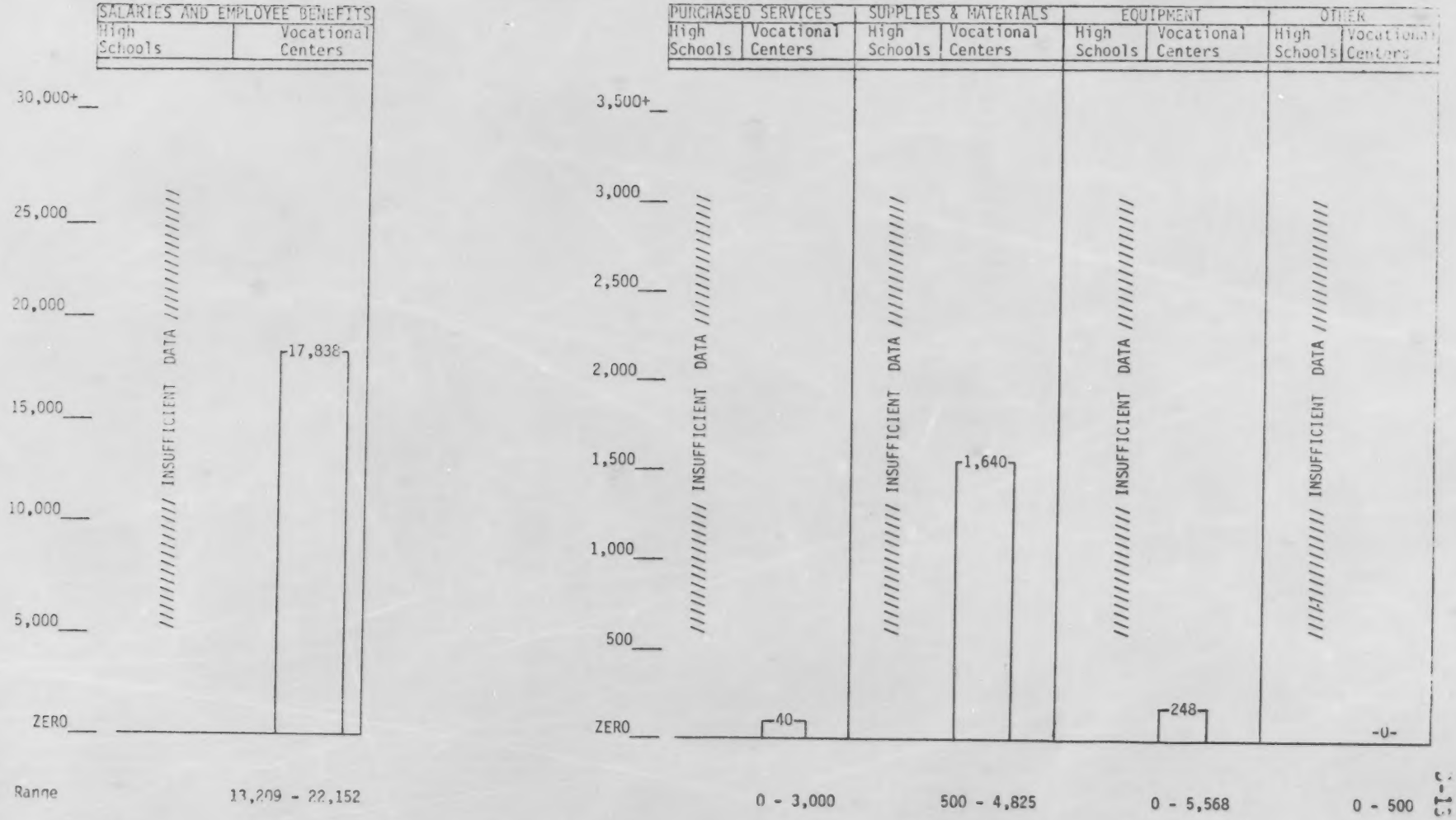
0 - 1,080
0 - 1,000

Figure 8

Medians For Each Cost Category By Program

AIR CONDITIONING AND REFRIGERATION — PROGRAM

17.0100 — O. E. CODE



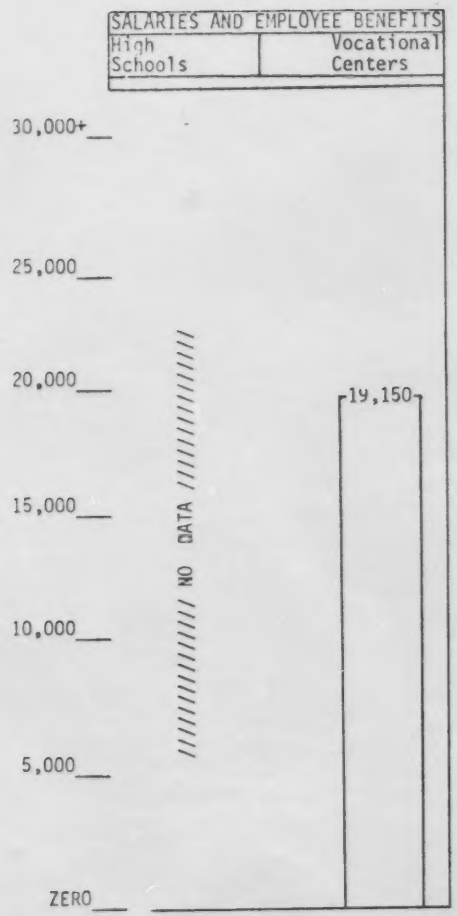
	Salaries and Employee Benefits	Purchased Services	Supplies & Materials	Equipment	Other
Range	13,209 - 22,152	0 - 3,000	500 - 4,825	0 - 5,568	0 - 500
Number of Respondents	29				

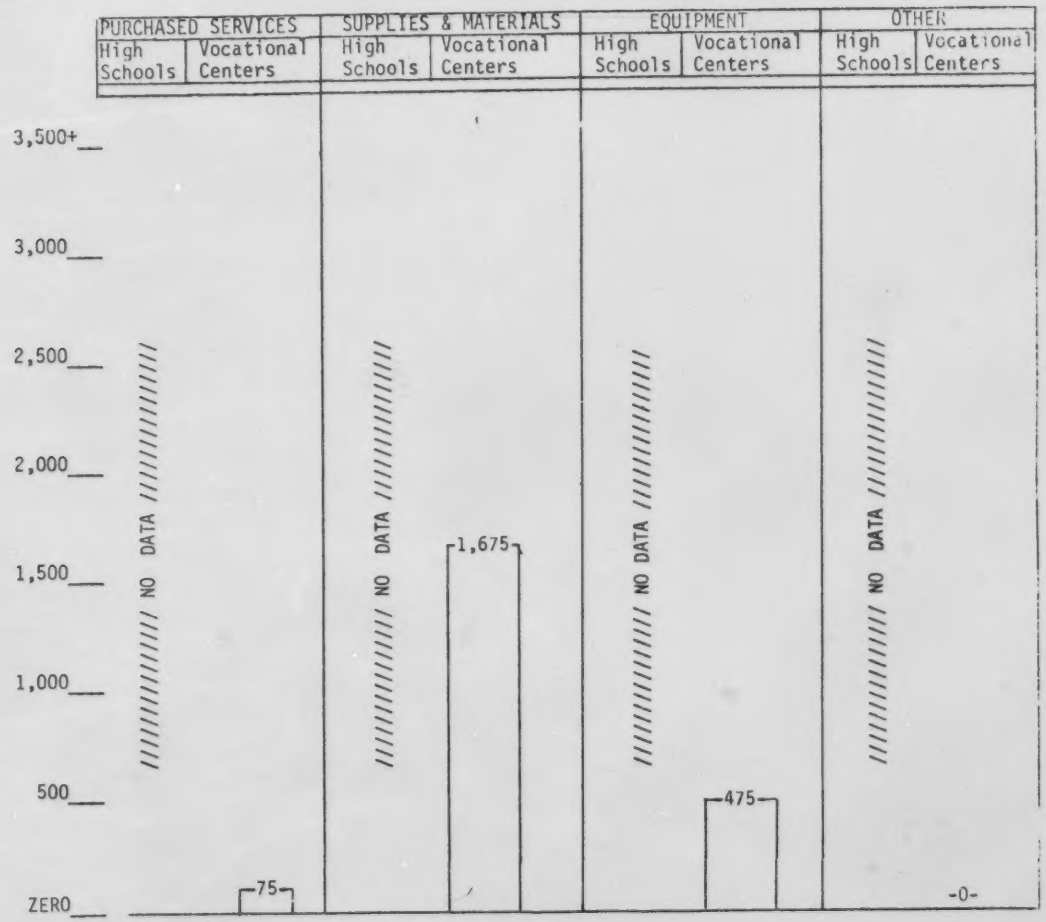
Figure 9

Medians For Each Cost Category By Program

APPLIANCE REPAIR
PROGRAM

17.0200
O. E. CODE





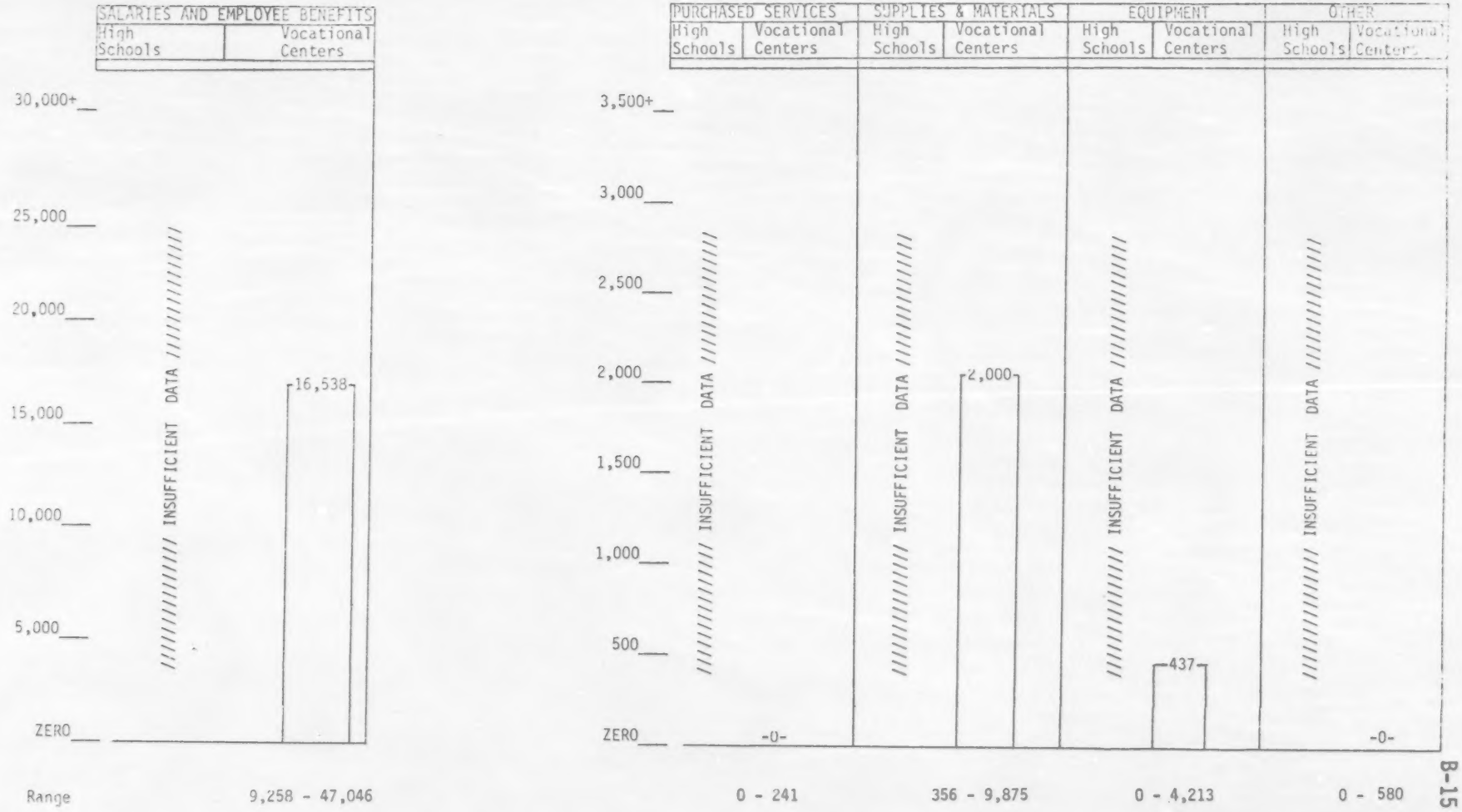
Range	18,242 - 20, 073	0 - 150	1,480 - 1,870	0 - 950	0
Number of Respondents	2				

Figure 10

Medians For Each Cost Category By Program

AUTO BODY REPAIR — PROGRAM

17.0301 — O. E. CODE



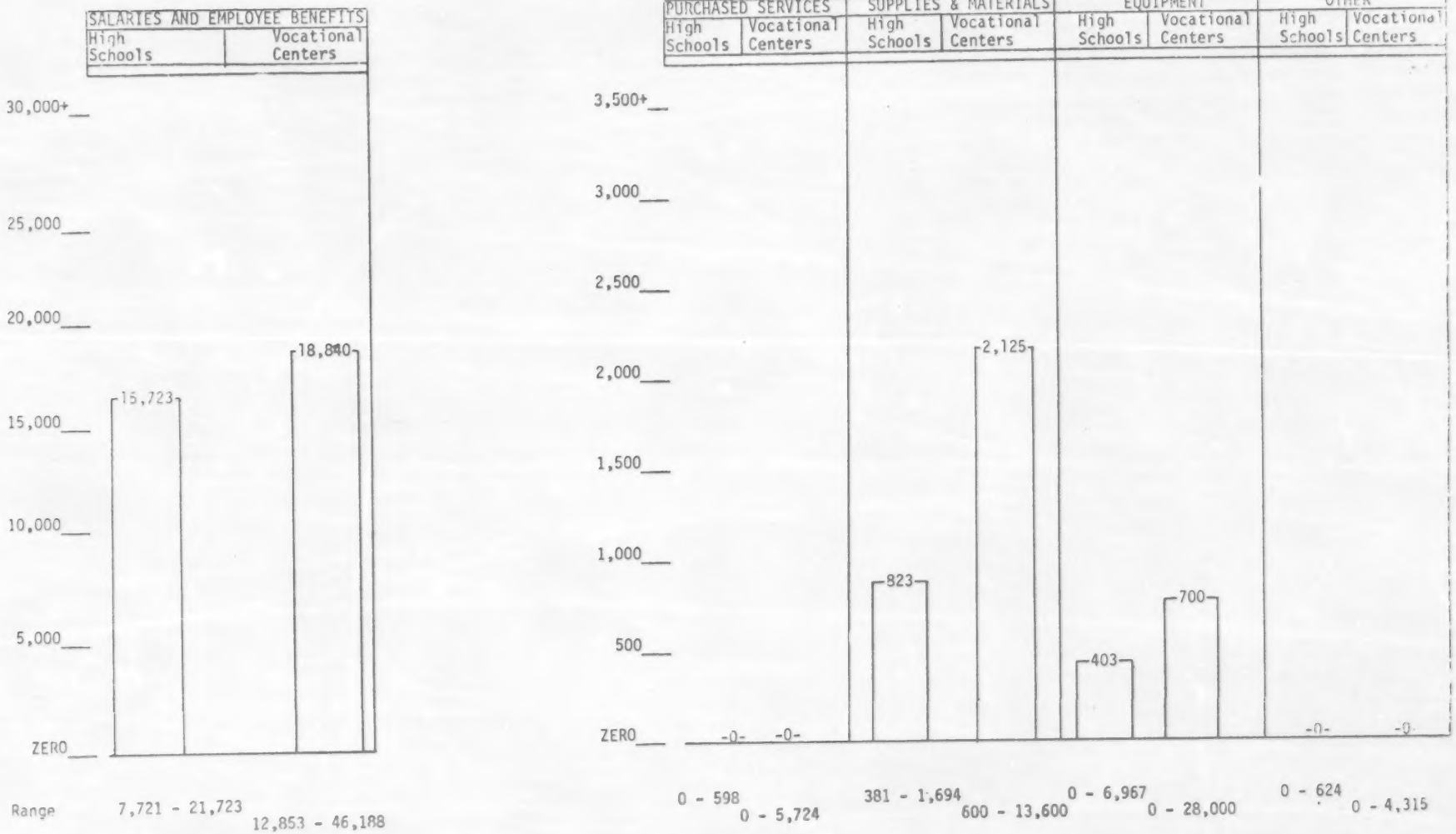
Range	9,258 - 47,046	0 - 241	356 - 9,875	0 - 4,213	0 - 580
Number of Respondents	69 / 21				

Figure 11

Medians For Each Cost Category By Program

AUTO MECHANICS — PROGRAM

17.0302 — O. E. CODE



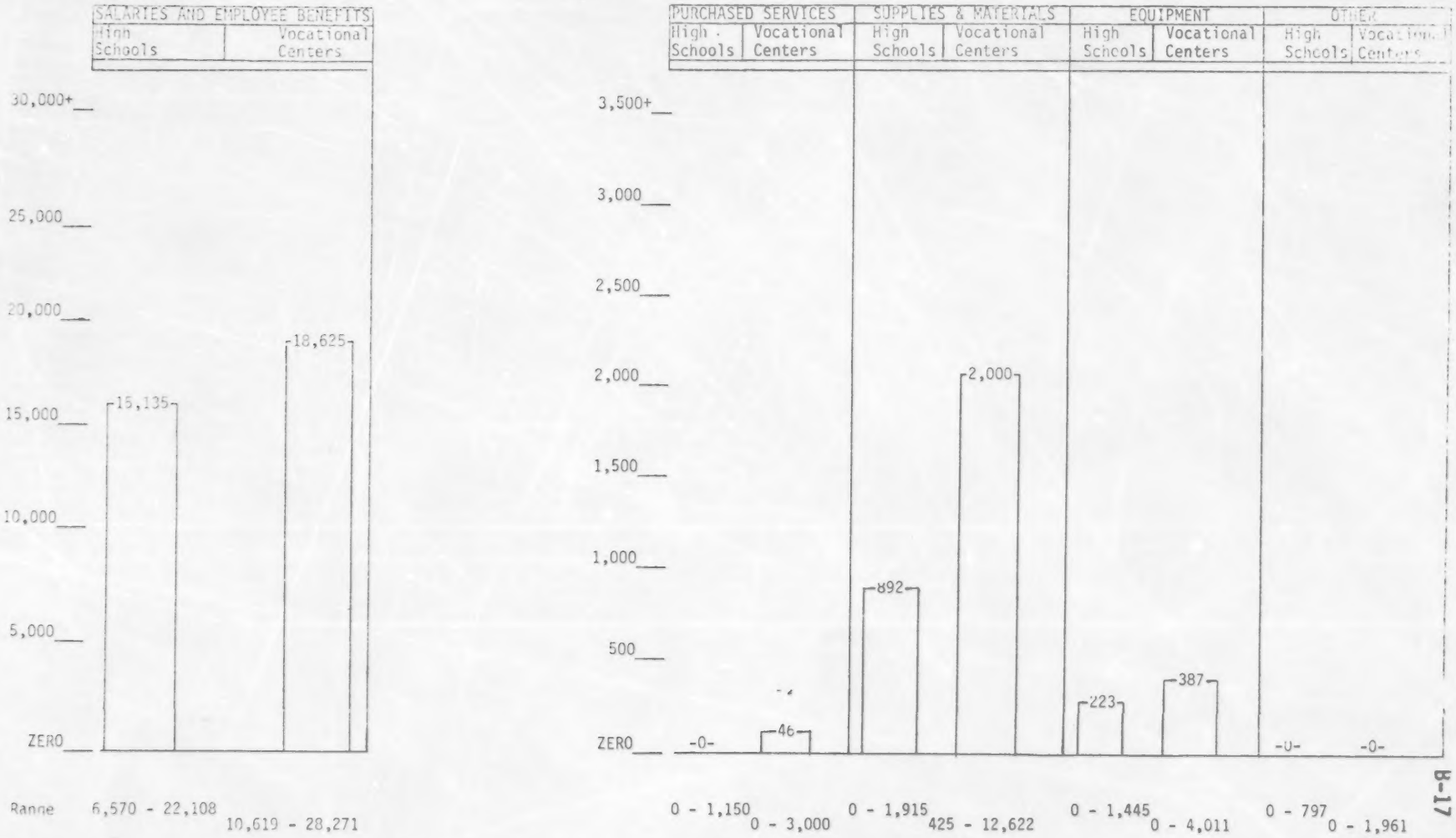
	High Schools	Vocational Centers
Salaries and Employee Benefits	7,721 - 21,723	12,853 - 46,188
Purchased Services	0 - 598	0 - 5,724
Supplies & Materials	381 - 1,694	600 - 13,600
Equipment	0 - 6,967	0 - 28,000
Other	0 - 624	0 - 4,315
Number of Respondents	15	37

Figure 12

Medians For Eacn Cost Category By Program

BUILDING CONSTRUCTION PROGRAM

17.1001 O. E. CODE



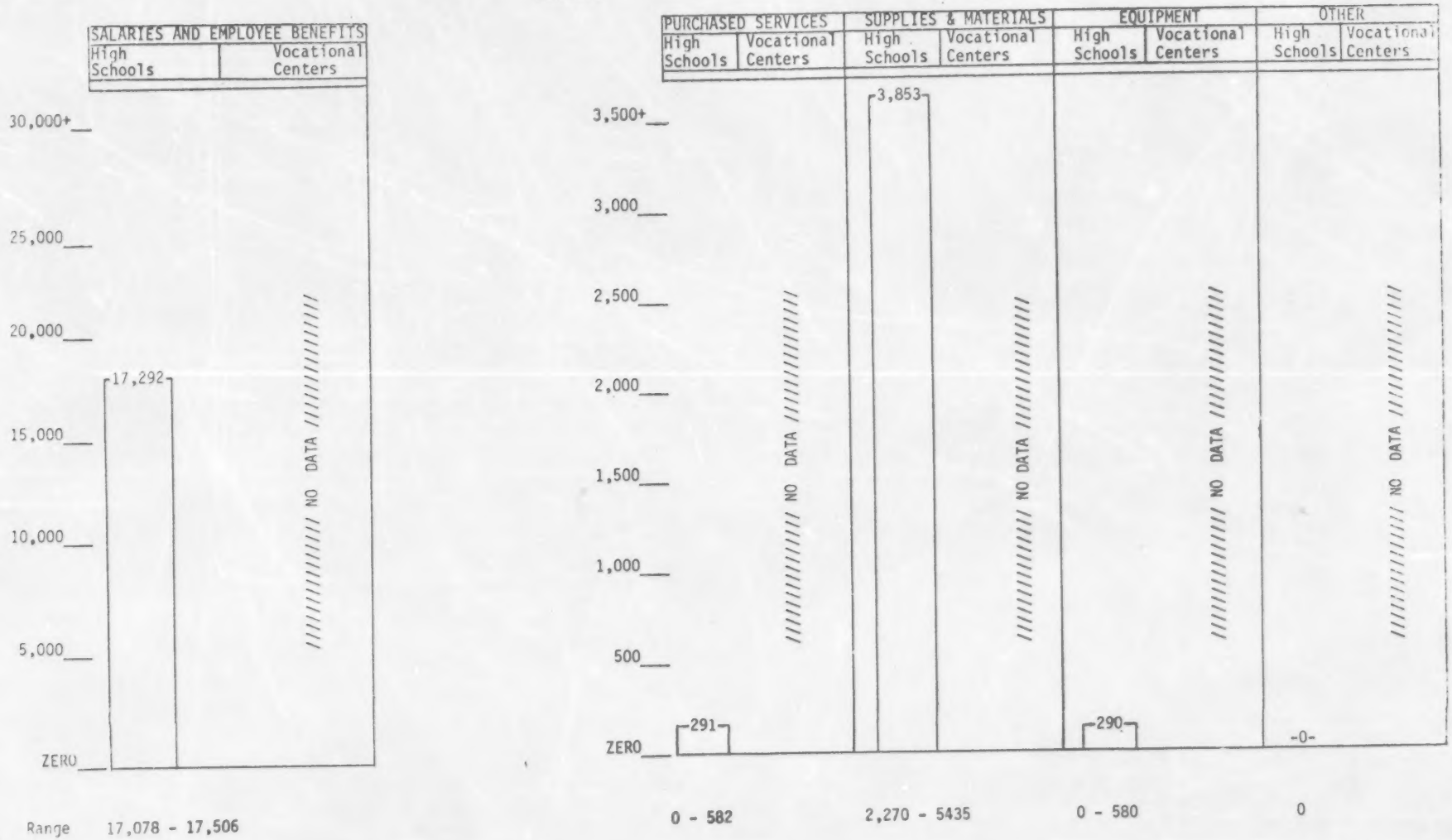
Range	6,570 - 22,108	10,619 - 28,271	0 - 1,150	0 - 3,000	0 - 1,915	425 - 12,622	0 - 1,445	0 - 4,011	0 - 797	0 - 1,961
Number of Respondents	16	38								

Figure 13

Medians For Each Cost Category By Program

CABINET MAKING
PROGRAM

17.3601
O. E. CODE



Range 17,078 - 17,506

0 - 582

2,270 - 5435

0 - 580

0

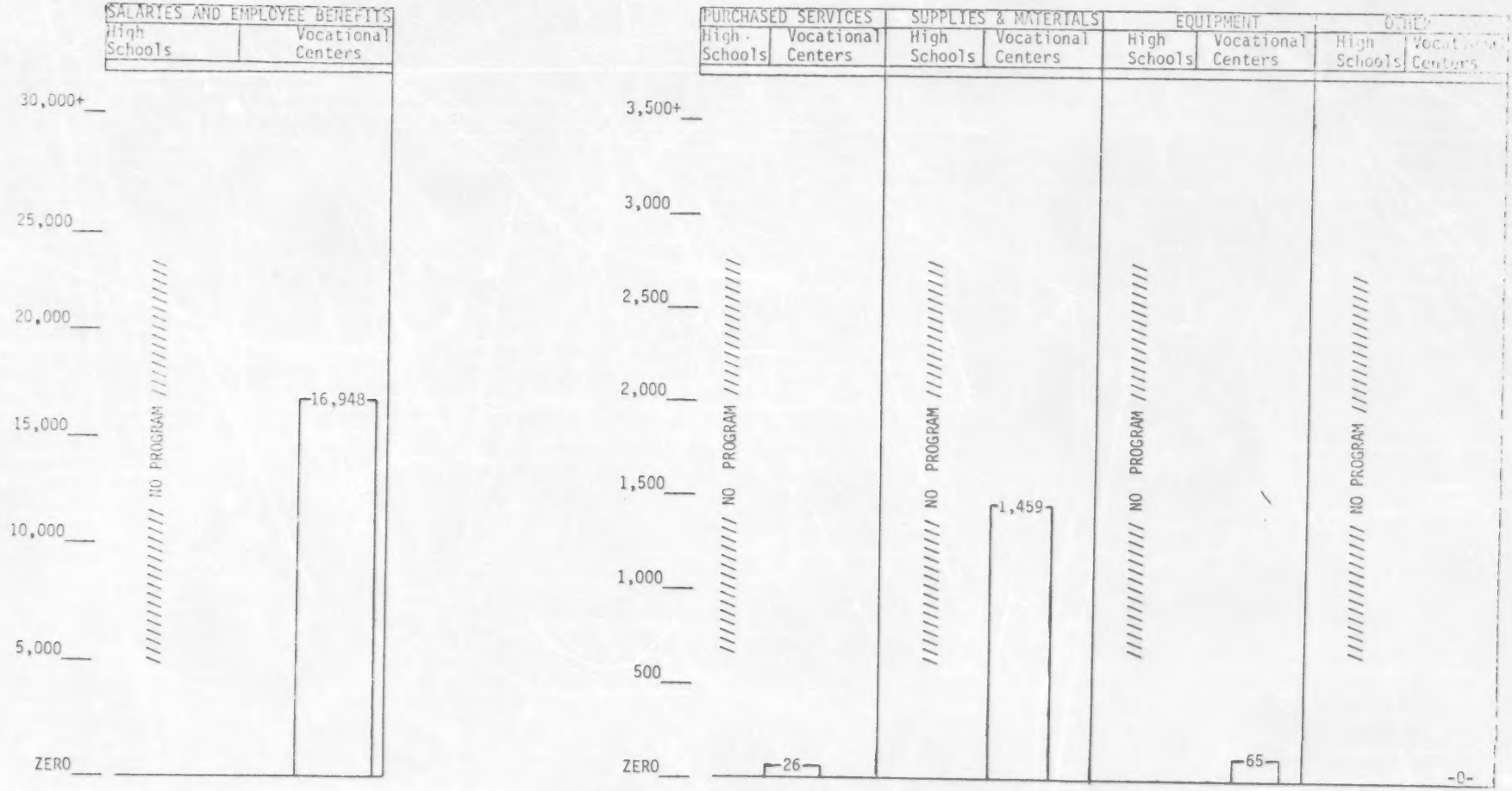
Number of Respondents 2

Figure 14

Medians For Each Cost Category By Program

COMMERCIAL ART
PROGRAM

17.0700
O. E. CODE



Range	16,156 - 18774	0 - 50	506 - 2,158	0 - 456	0 - 90
Number of Respondents	3				

Figure 15

Medians For Each Cost Category By Program

COSMETOLOGY
PROGRAM

17.2602
O. E. CODE

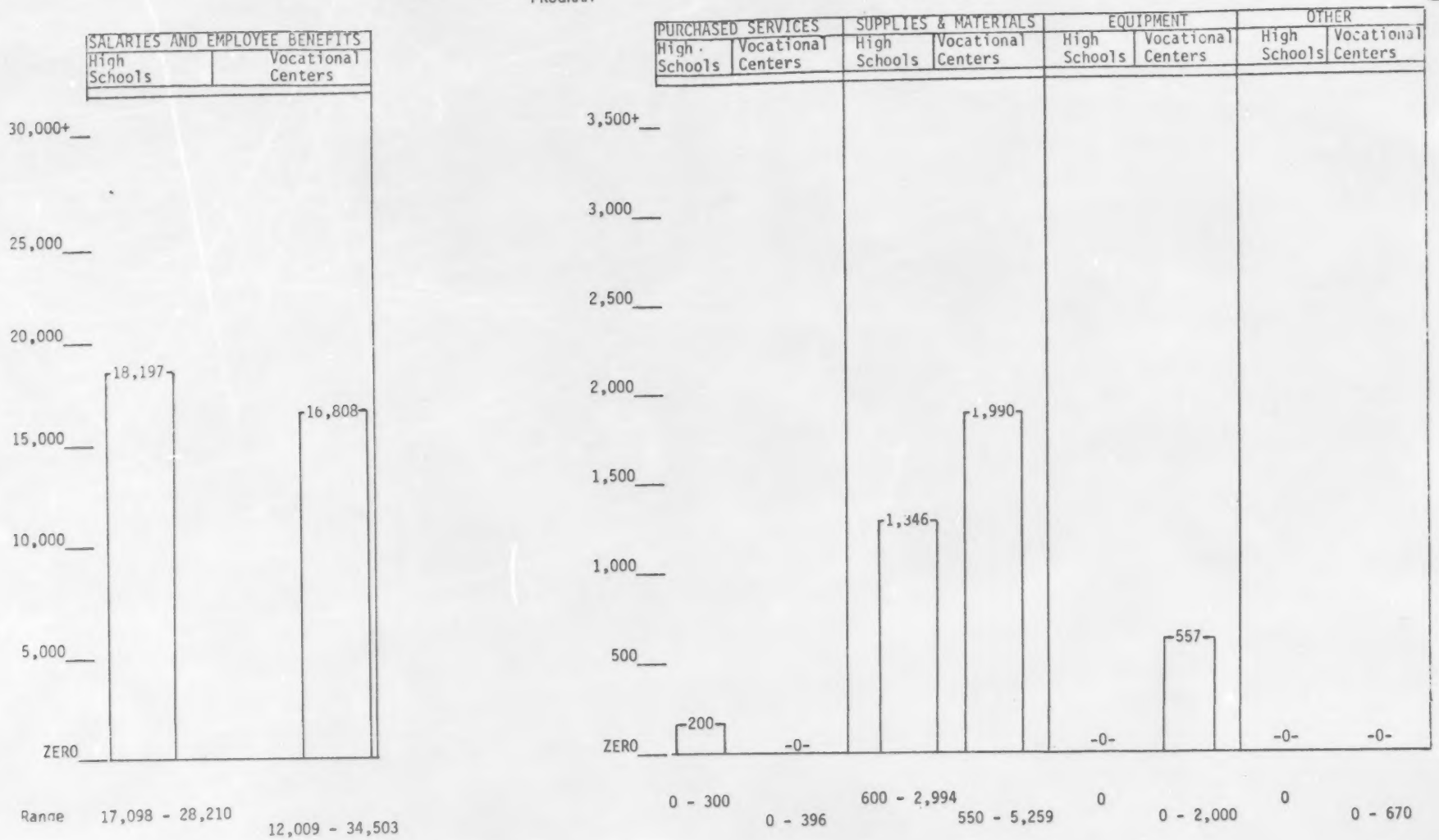
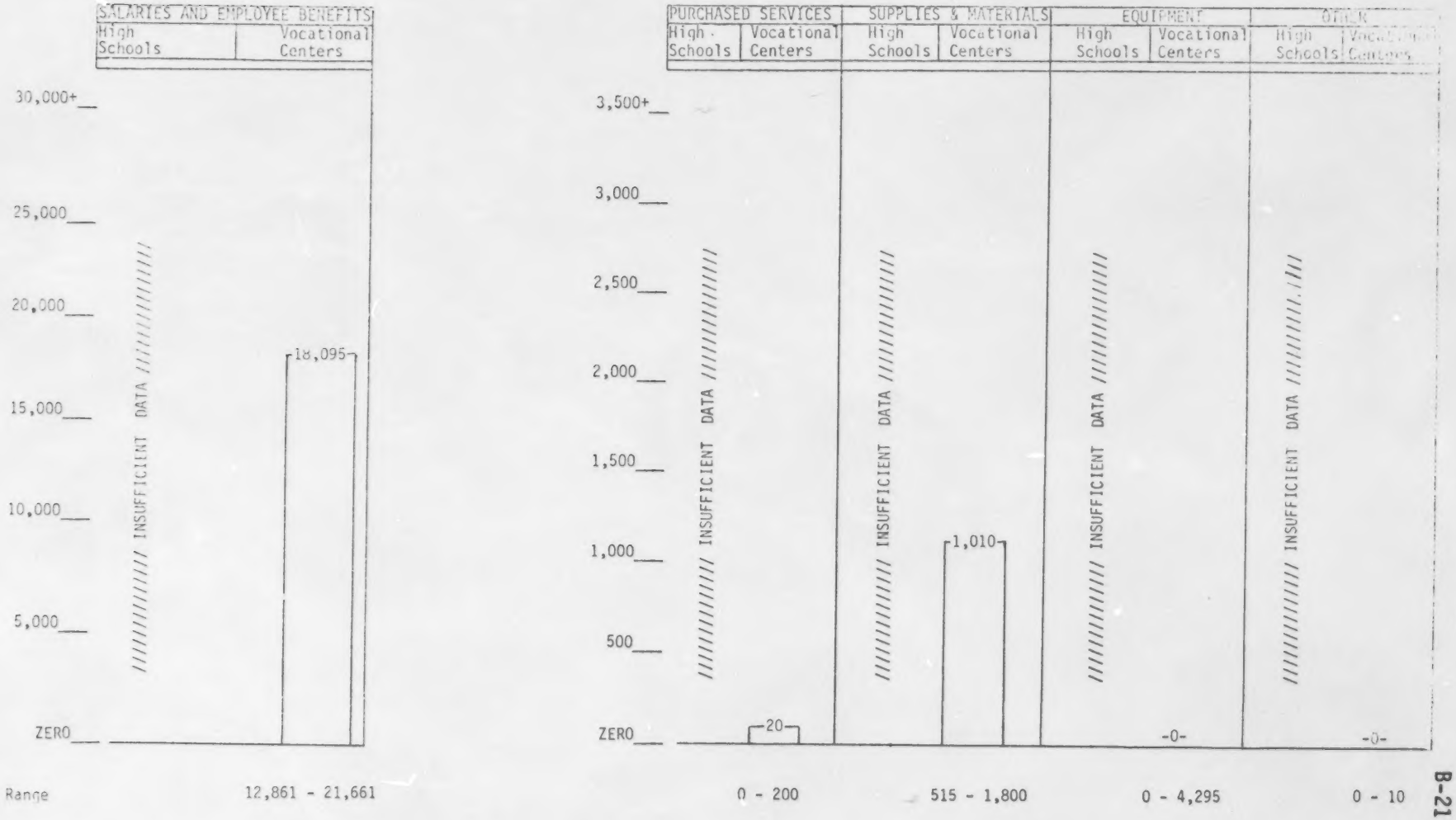


Figure 16

Medians For Each Cost Category By Program

DRAFTING
PROGRAM

17.1300
O. E. CODE



Range	12,861 - 21,661	0 - 200	515 - 1,800	0 - 4,295	0 - 10
Number of Respondents	16				

81

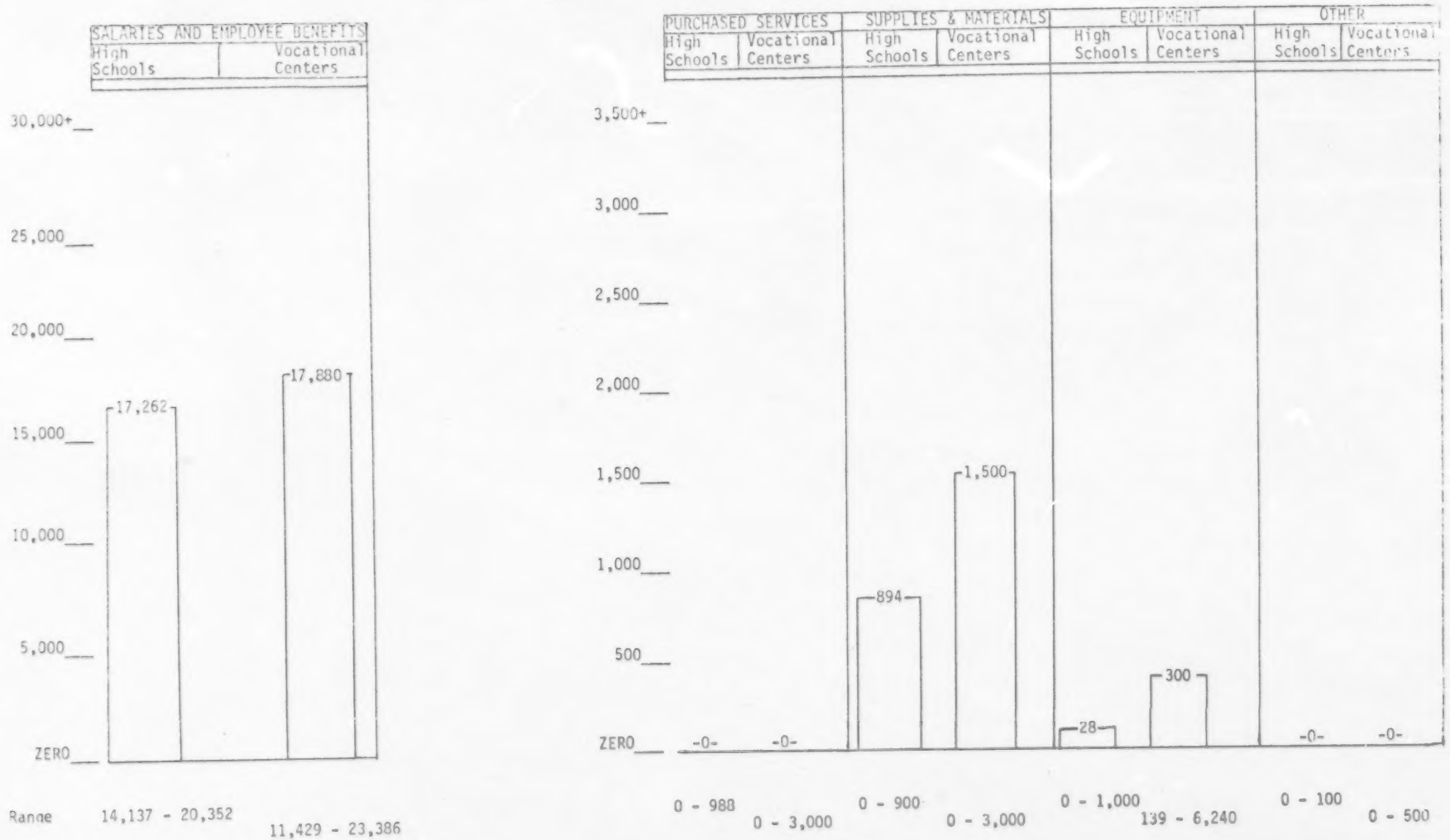
82

Figure 17

Medians For Each Cost Category By Program

ELECTRICITY
PROGRAM

17.1002
O. E. CODE



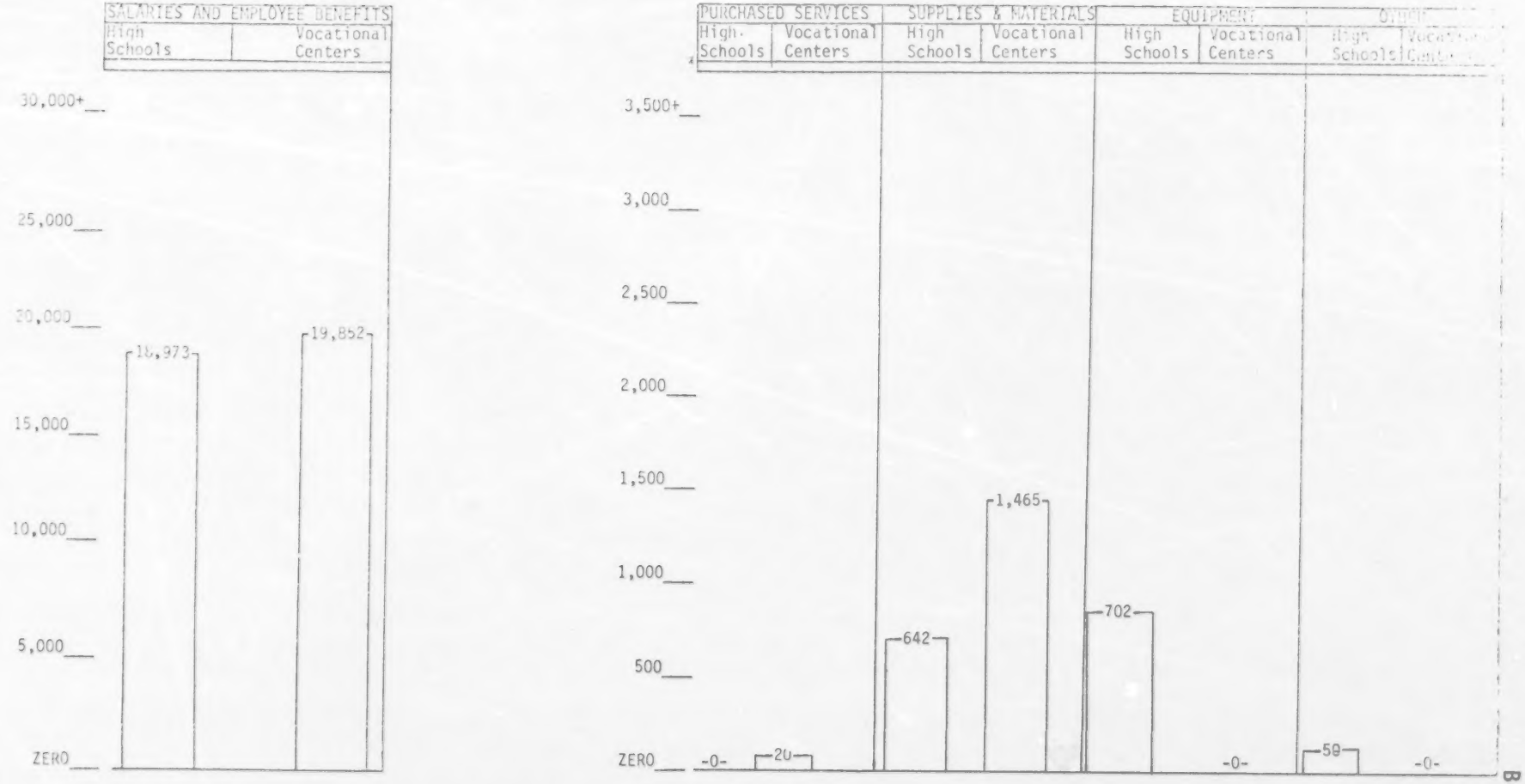
Range	14,137 - 20,352	11,429 - 23,386	0 - 988	0 - 3,000	0 - 900	0 - 3,000	0 - 1,000	139 - 6,240	0 - 100	0 - 500
Number of Respondents	6	32								

Figure 18

Medians For Each Cost Category By Program

ELECTRONICS
PROGRAM

17.1500
O. E. CODE



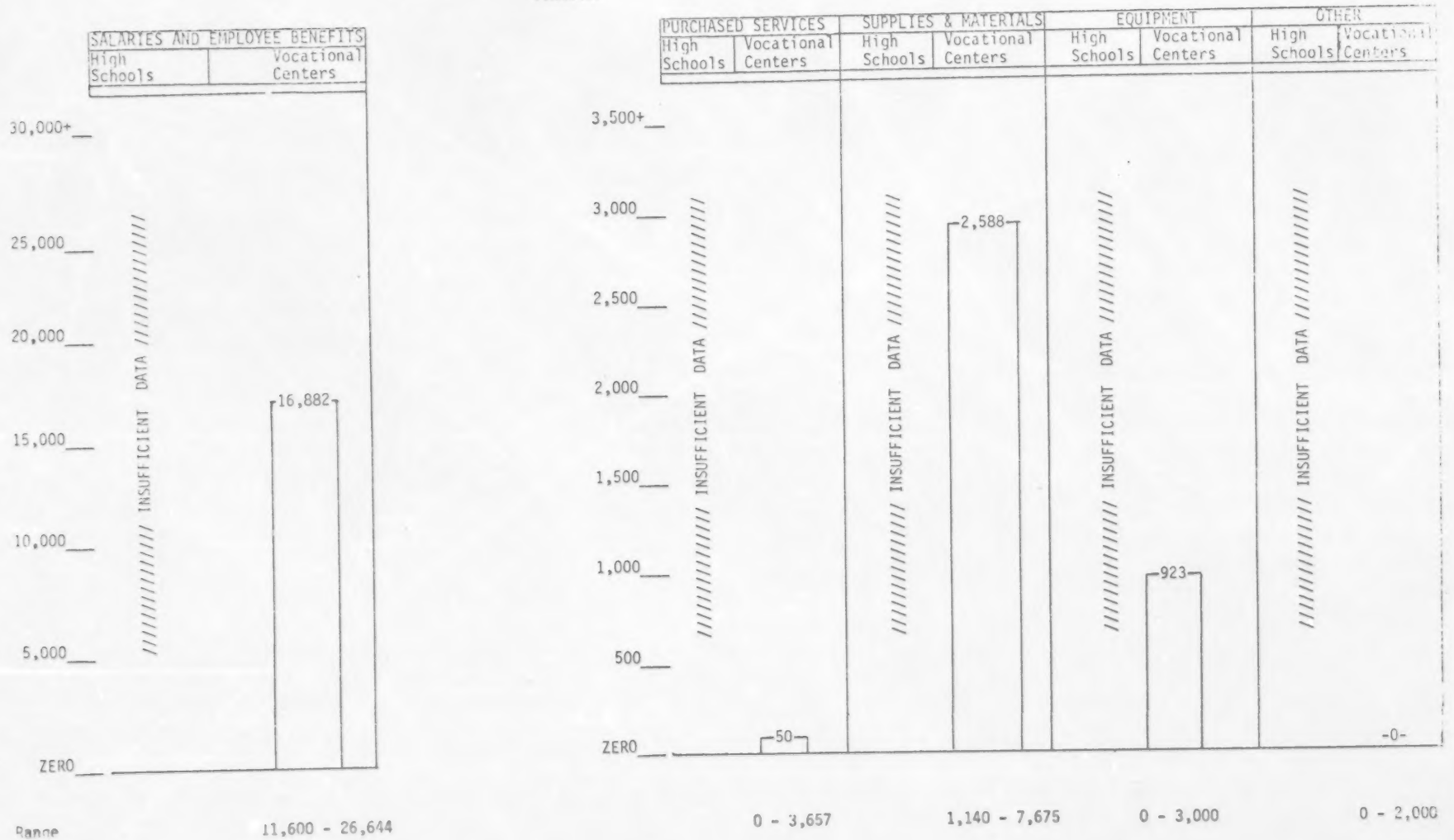
Range	18,140 - 19,806	17,160 - 23,018	0	0 - 241	300 - 983	796 - 1862	403 - 1,000	0 - 1,164	0 - 100	0
Number of Respondents	2	6								

Figure 19

Medians For Each Cost Category By Program

GRAPHIC COMMUNICATIONS — PROGRAM

17.1900 — O. E. CODE



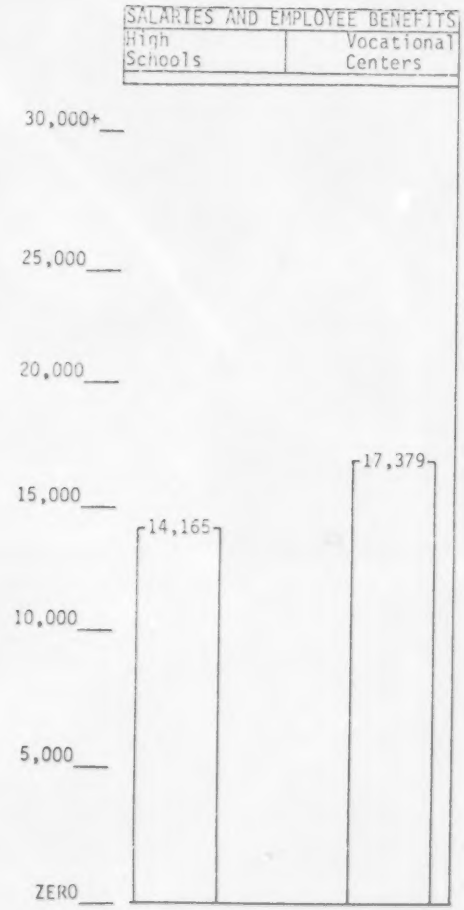
Range	11,600 - 26,644	0 - 3,657	1,140 - 7,675	0 - 3,000	0 - 2,000
Number of Respondents	23				

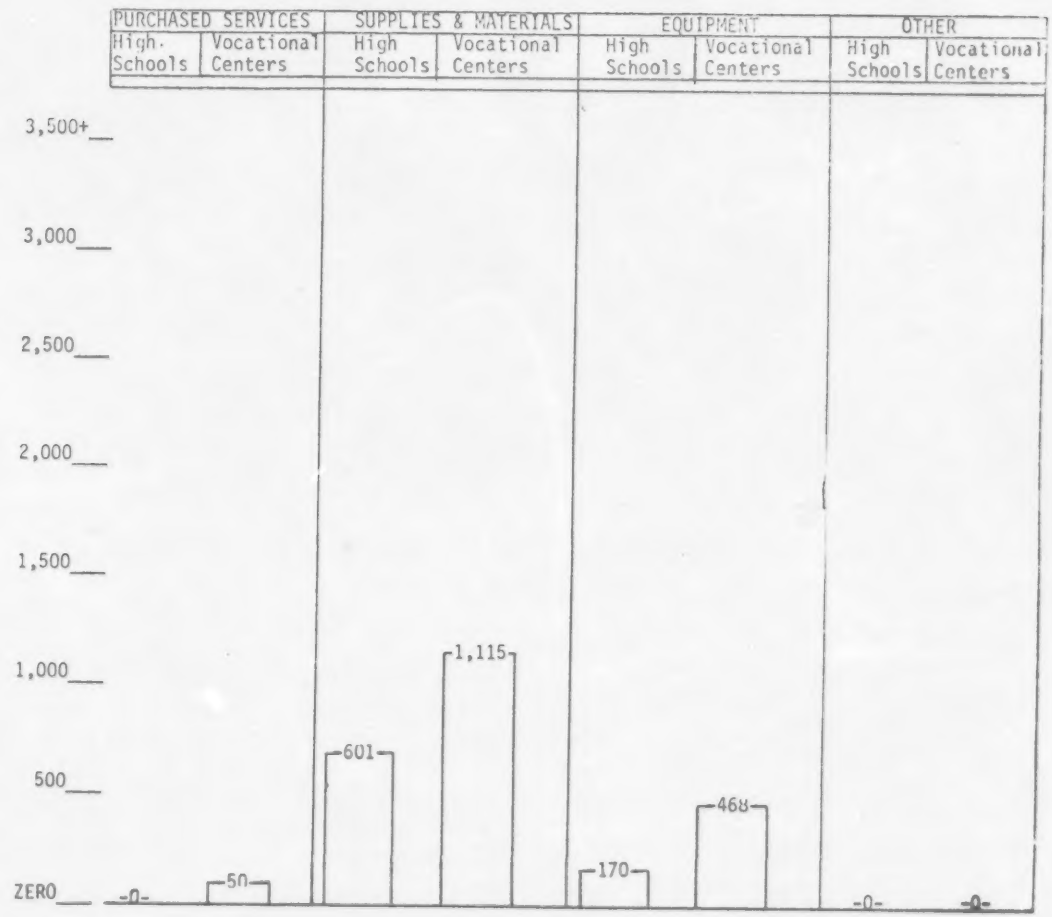
Figure 20

Medians For Each Cost Category By Program

INDUSTRIAL SEWING — PROGRAM

17.3399 — O. E. CODE





Range	9,539 - 20,563	10,195 - 35,086	0 - 200	0 - 2,584	200 - 4,000	231 - 2,600	0 - 500	0 - 4,656	0 - 200	0 - 647
Number of Respondents	8	25								

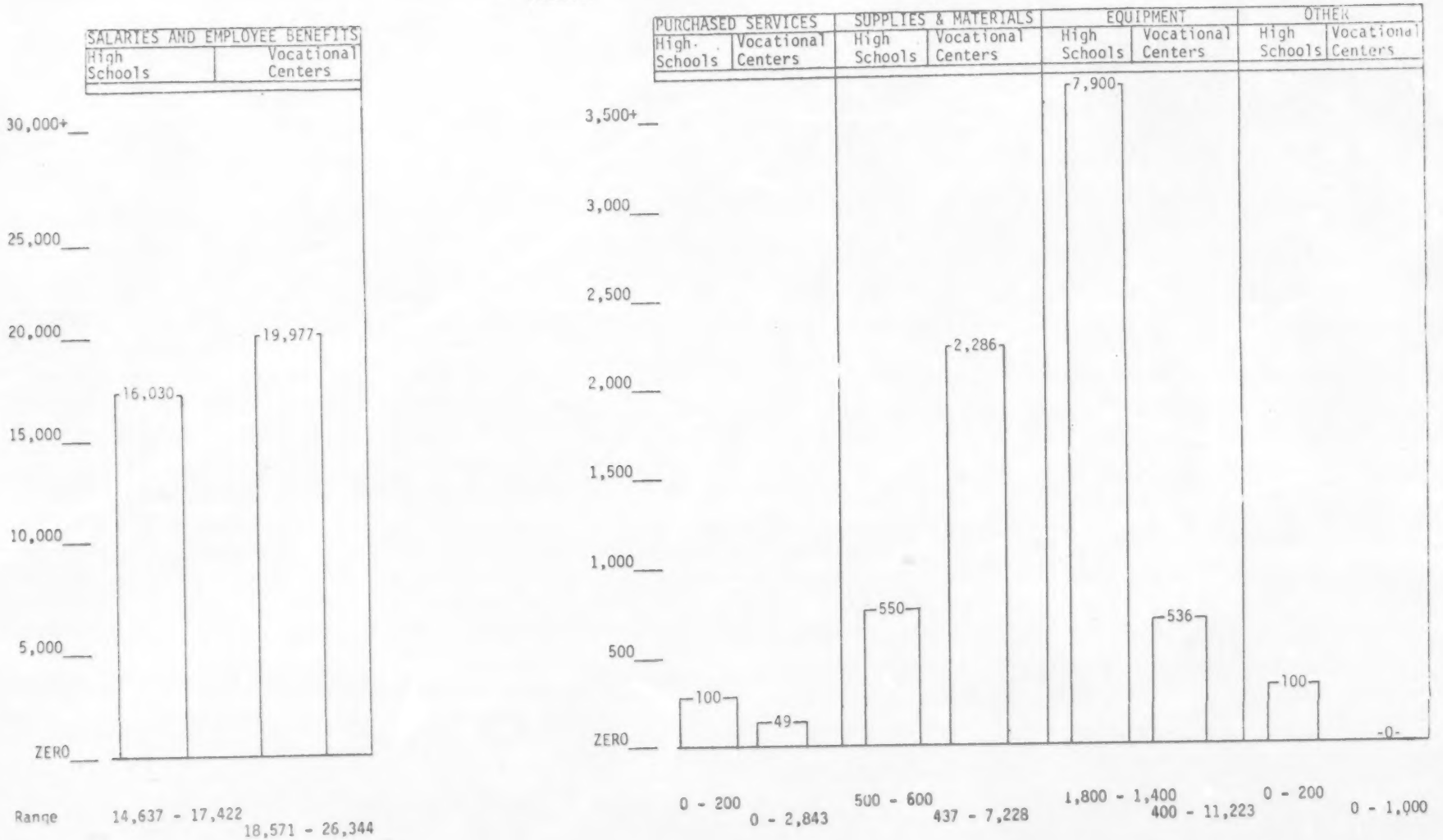
B-25

Figure 21

Medians For Each Cost Category By Program

MACHINE SHOP
PROGRAM

17.2302
O. E. CODE



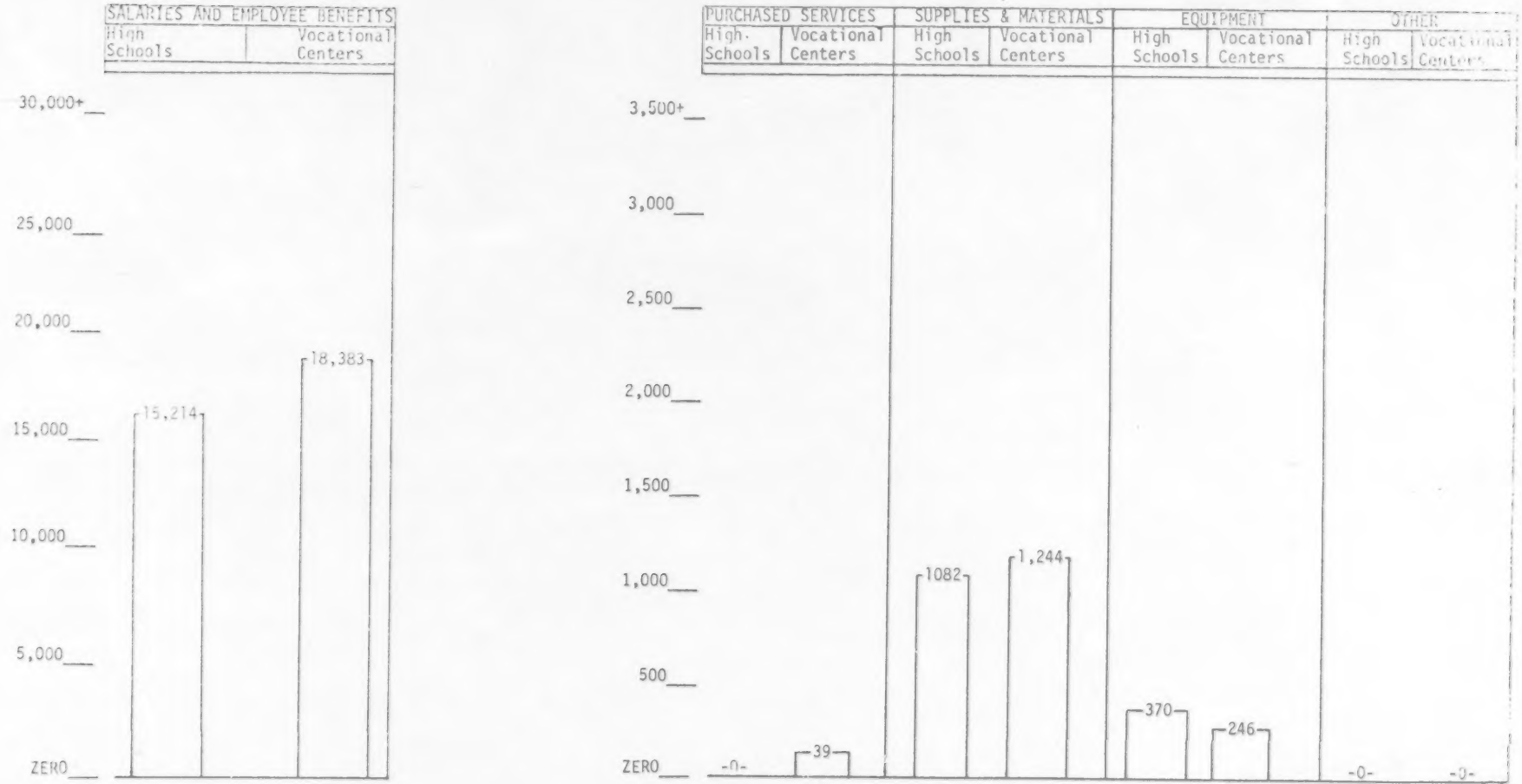
	SALARIES AND EMPLOYEE BENEFITS		PURCHASED SERVICES		SUPPLIES & MATERIALS		EQUIPMENT		OTHER	
	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers
Range	14,637 - 17,422	18,571 - 26,344	0 - 200	0 - 2,843	500 - 600	437 - 7,228	1,800 - 1,400	400 - 11,223	0 - 200	0 - 1,000
Number of Respondents	2	20								

Figure 22

Medians For Each Cost Category By Program

MASONRY — PROGRAM

17.1004 — O. E. CODE



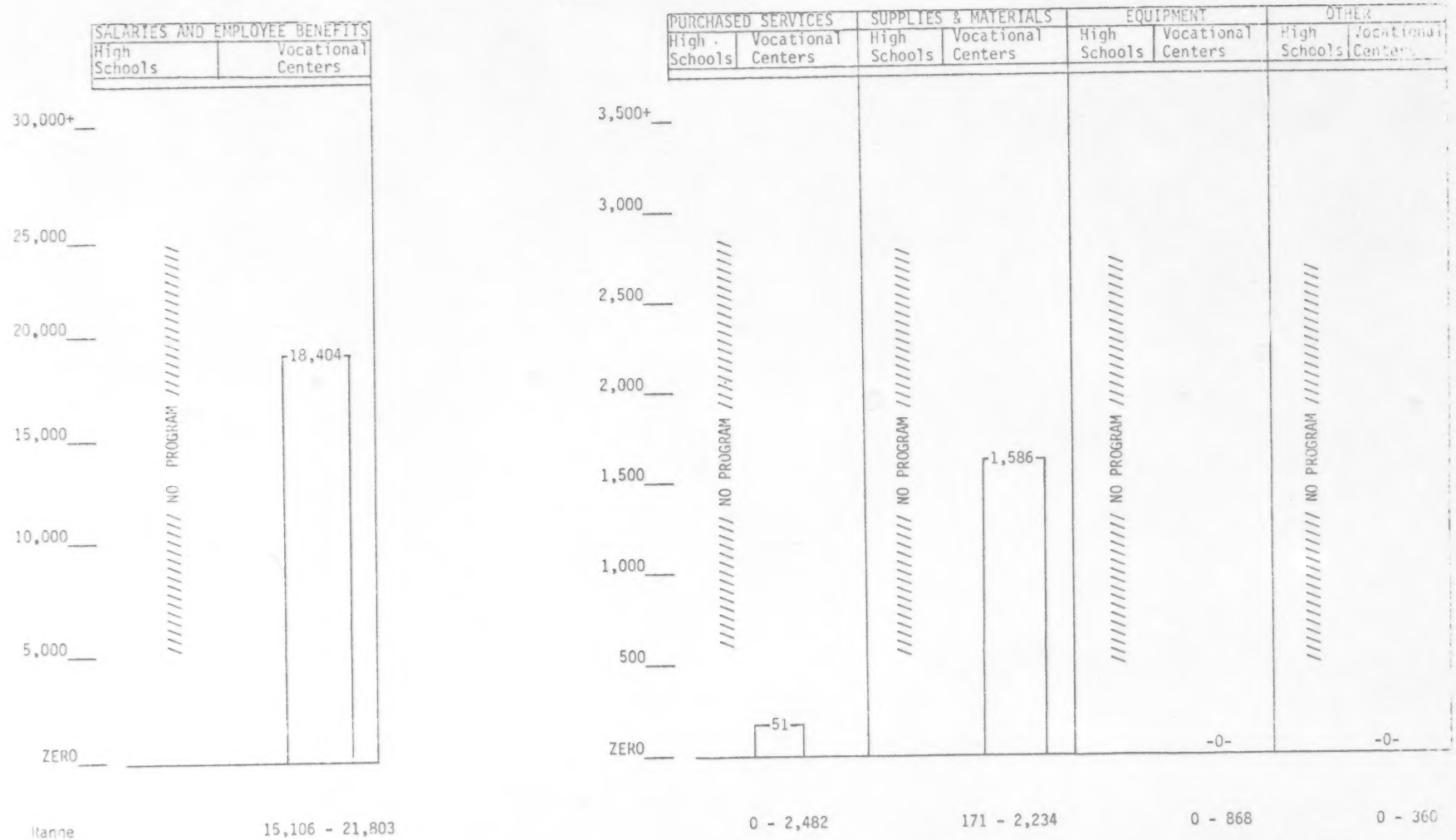
Range	9,539 - 20,441	12,828 - 50,537	0 - 236	0 - 2,636	200 - 2,269	354 - 3,640	0 - 2,427	0 - 2,000	0 - 100	0 - 932
Number of Respondents	13	37								

Figure 23

Medians For Each Cost Category By Program

PLUMBING AND PIPEFITTING PROGRAM

17.1007 O. E. CODE



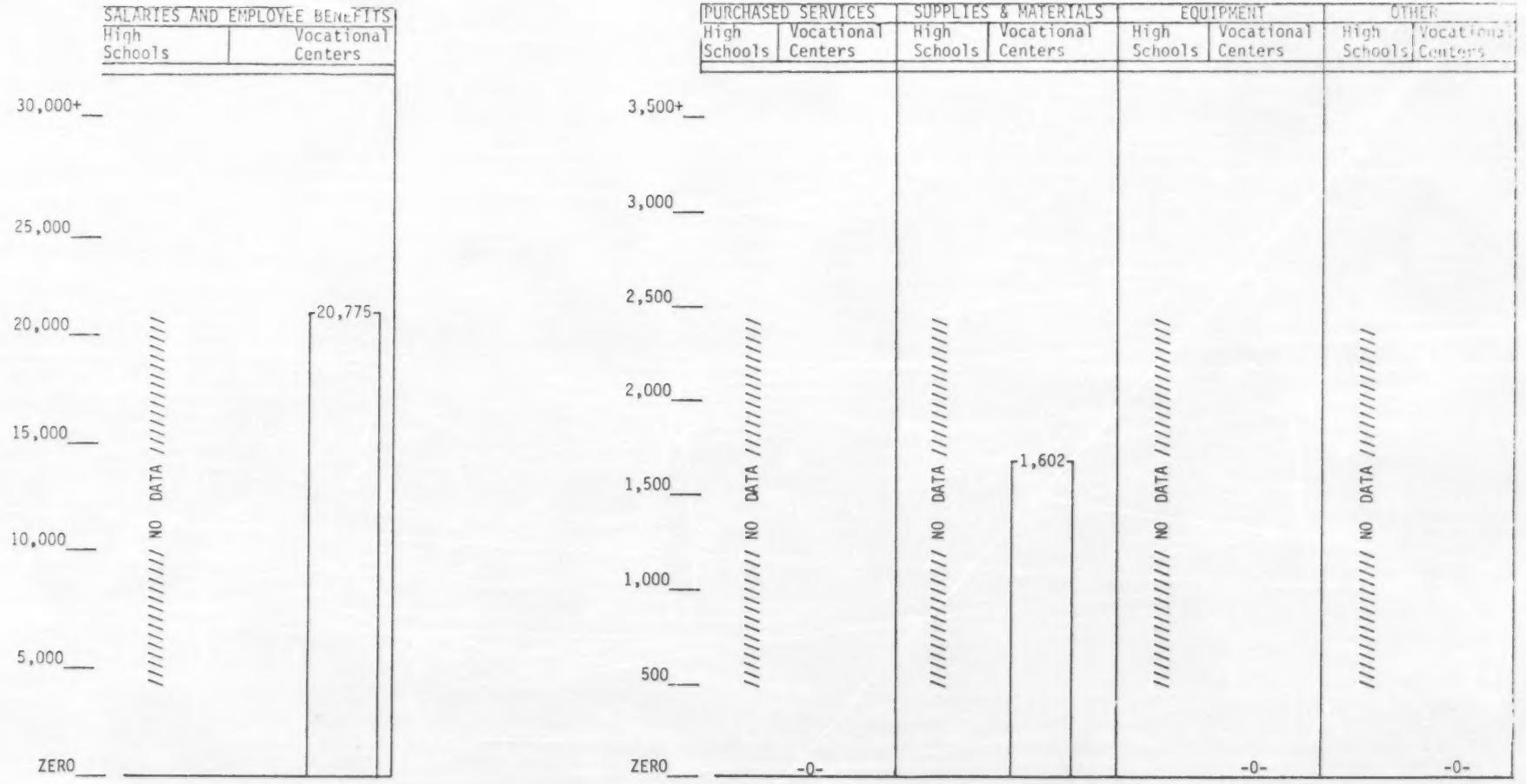
Range	15,106 - 21,803	0 - 2,482	171 - 2,234	0 - 868	0 - 360
Number of Respondents	11				

Figure 24

Medians For Each Cost Category By Program

RADIO AND TELEVISION REPAIR — PROGRAM

17.1503 — O. E. CODE



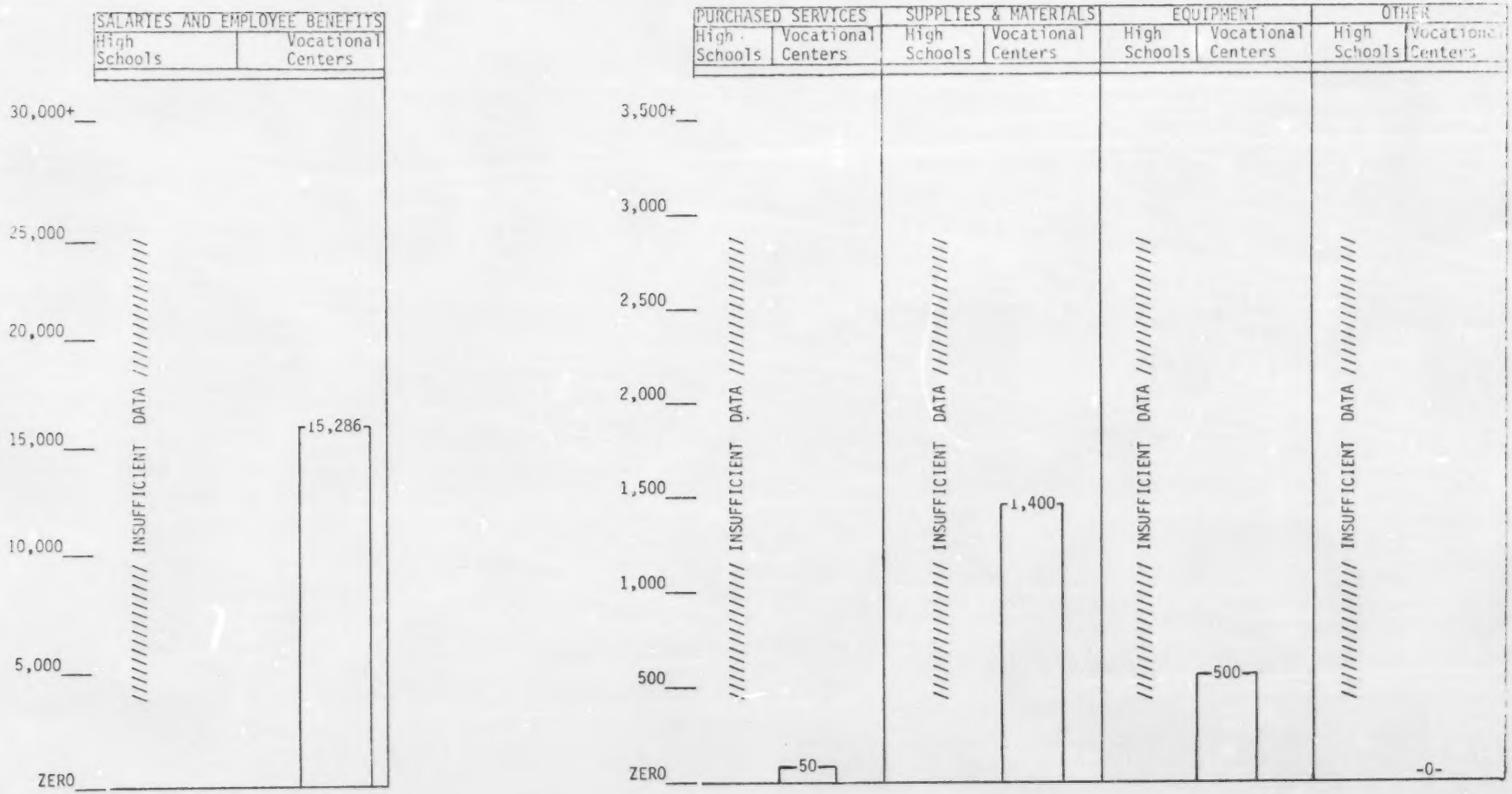
	SALARIES AND EMPLOYEE BENEFITS		PURCHASED SERVICES		SUPPLIES & MATERIALS		EQUIPMENT		OTHER	
	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers	High Schools	Vocational Centers
Range		15,406 - 21,429		0 - 37		828 - 10,301		0 - 8,064		0 - 18
Number of Respondents		3								

Figure 25

Medians For Each Cost Category By Program

SMALL ENGINE REPAIR — PROGRAM

17.3100 — O. E. CODE



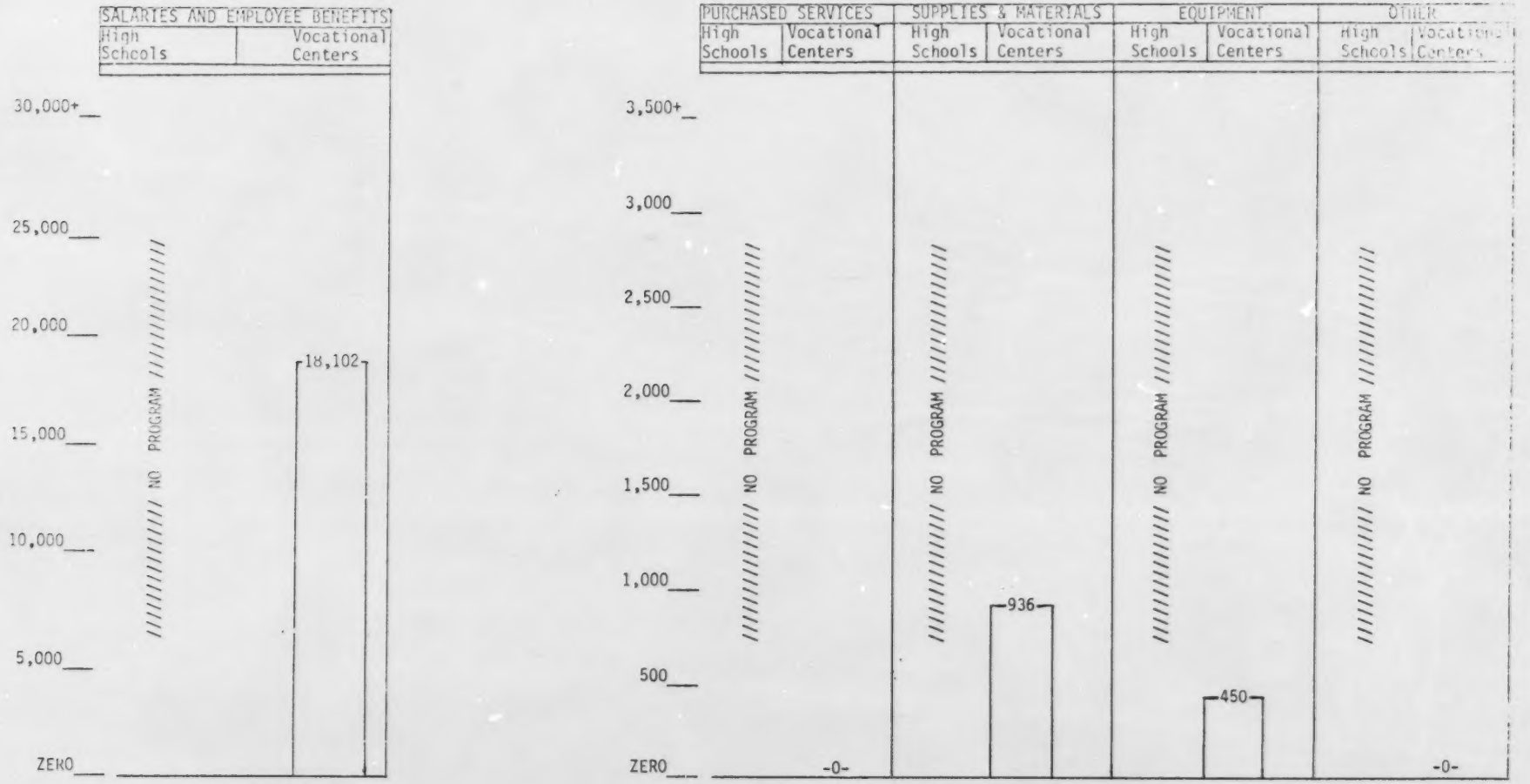
	High Schools	Vocational Centers
Salaries and Employee Benefits		
Range		2,584 - 21,803
Number of Respondents		9
Purchased Services		
Range		0 - 2,480
Supplies & Materials		
Range		510 - 3,073
Equipment		
Range		0 - 1,957
Other		
Range		0 - 478

Figure 26

Medians For Each Cost Category By Program

TAILORING
PROGRAM

17.3302
O. E. CODE



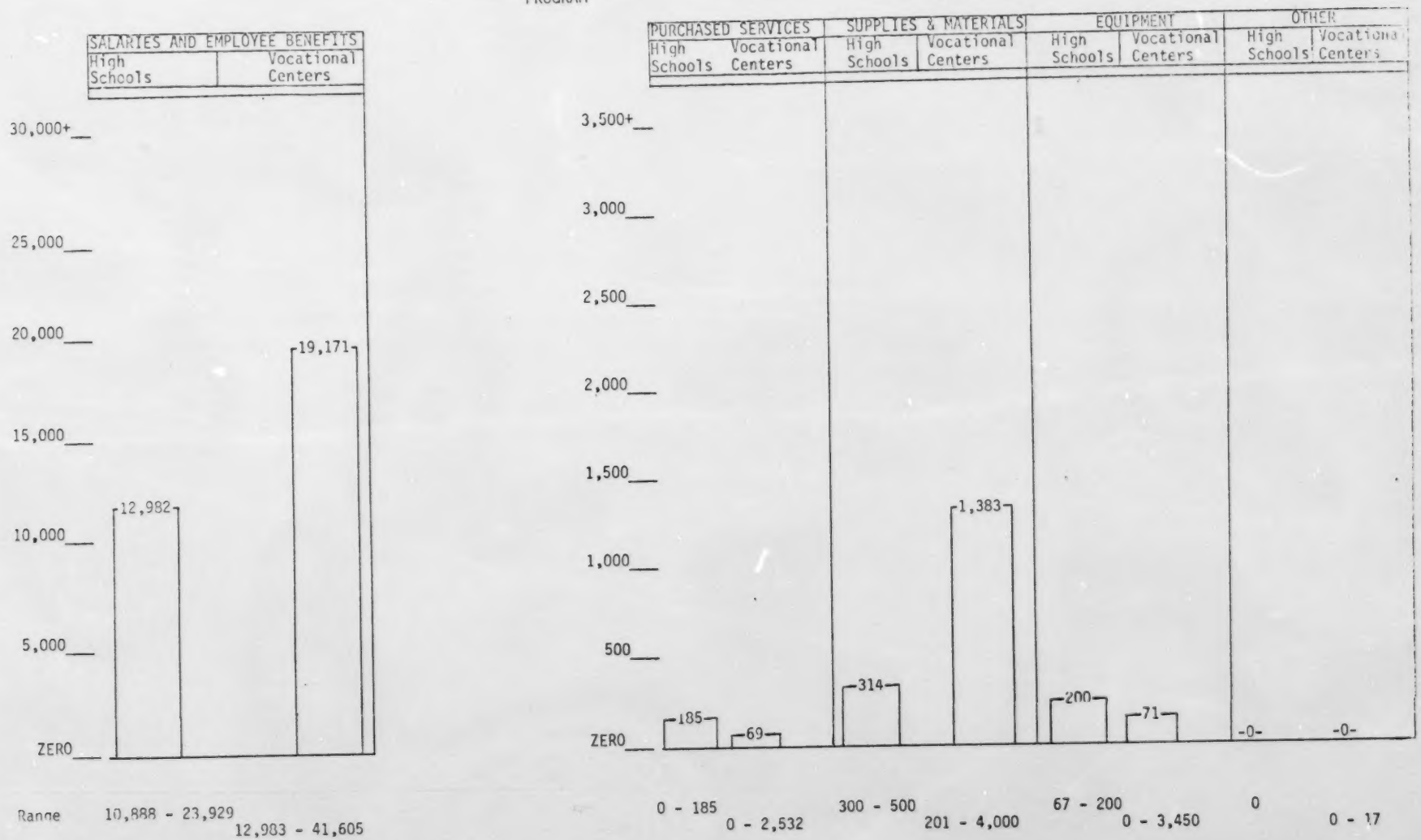
Range	14,892 - 21,311	0	800 - 1,072	0 - 900	0
Number of Respondents	2				

Figure 27

Medians For Each Cost Category By Program

TEXTILES
PROGRAM

17.3300
O. E. CODE



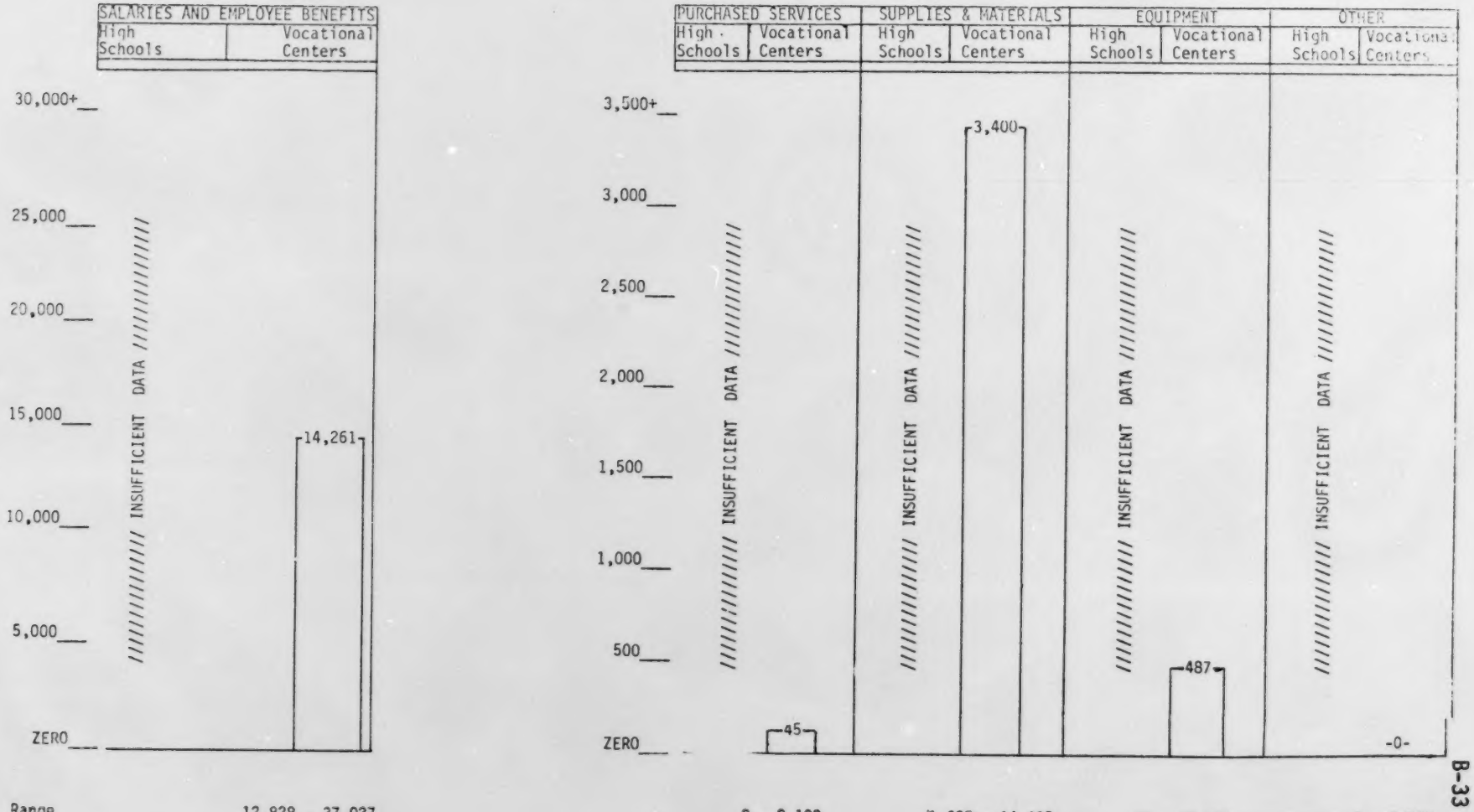
Range	10,888 - 23,929	12,983 - 41,605	0 - 185	0 - 2,532	300 - 500	201 - 4,000	67 - 200	0 - 3,450	0	0 - 17
Number of Respondents	3	8								

Figure 28

Medians For Each Cost Category By Program

WELDING
PROGRAM

17.2306
O. E. CODE



Range	12,828 - 37,027	0 - 2,100	1,685 - 14,485	36 - 10,468	0 - 2,000
Number of Respondents	29				

B-33